

3-D Imaging Past & Present

July/August 2009
Volume 35, Number 1

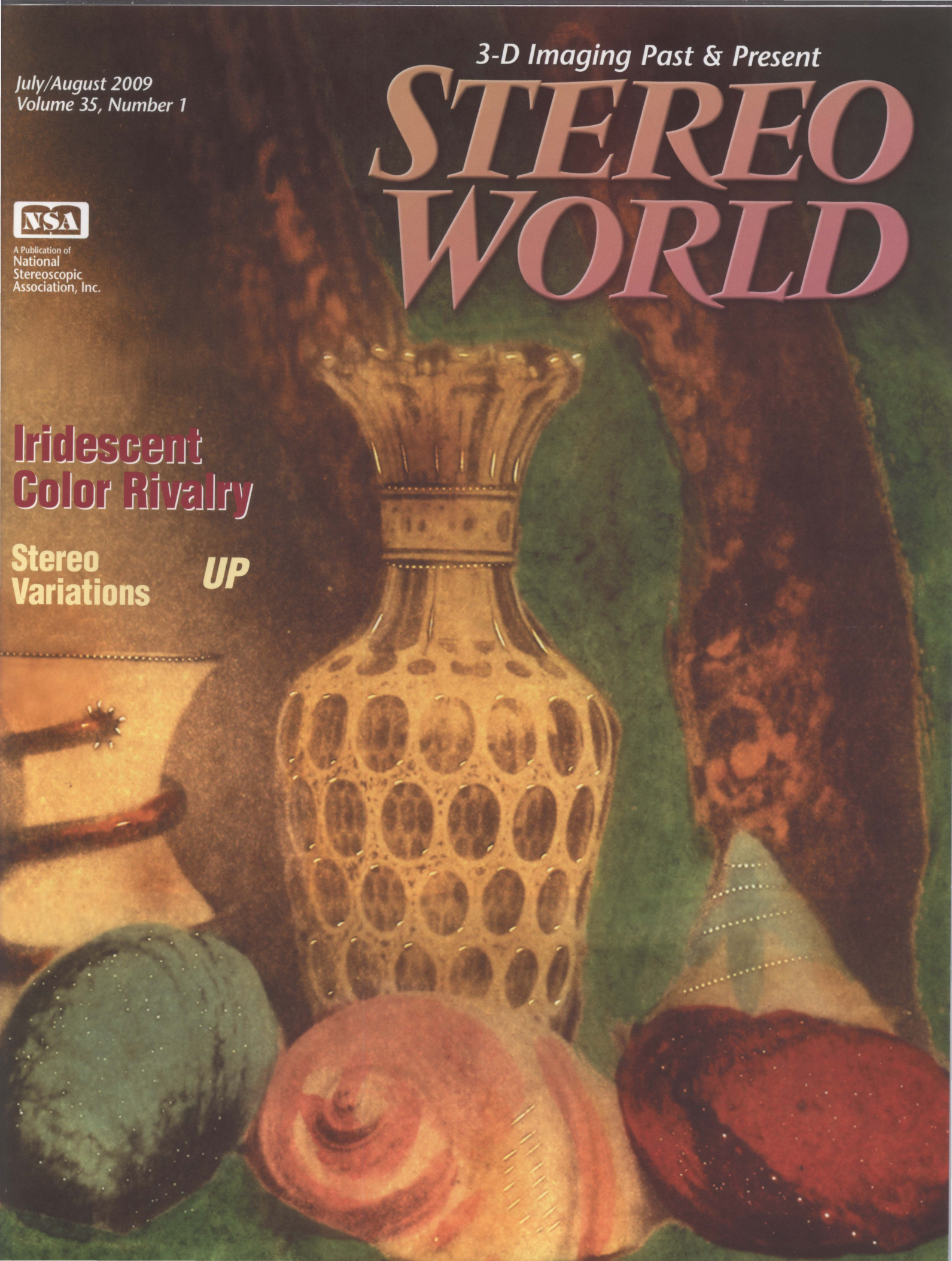


A Publication of
National
Stereoscopic
Association, Inc.

STEREO WORLD

**Iridescent
Color Rivalry**

**Stereo
Variations** *UP*



'50s Flavored Finds

A taste of the late '40s through the early '60s found in amateur stereo slides

by Mark Willke

Summer Sightseeing

The summer travel season is upon us, so I thought a couple of vacation views would work well in this issue's column. I've always valued the power of 3-D in preserving moments from my own vacations and sightseeing trips, allowing me to revisit favorite times and places again and again.

The first image this issue shows a group of people posing for a photo in front of a waterfall. The

Kodachrome slide is unlabeled, but since it was found in a group of views that appear to have been taken in and around Oregon, I am guessing that the location here was in the waterfall area of the Columbia River Gorge just east of Portland, perhaps even at the popular Multnomah Falls. I find it interesting that the women seem dressed in nice clothes, while the children appear quite casual (especially the boy in his jeans and T-shirt). Even more interesting is the way that

most of the people are looking off to the left of the photo, instead of smiling at the camera. It almost appears to be a posed image out of a JC Penney catalog rather than a family snapshot! (Matching red purse sold separately on page 759!)

The second image, by a different (but still unknown) photographer, is truly one of the best backlit stereo photos I've seen, showing a woman obviously not dressed for outdoor adventure petting a deer under its chin in a woodsy-looking setting. The bright early-morning sun (or perhaps it's late-evening sun?) is shining almost directly into the camera, but it is filtered by trees in the distance so as not to be too blinding. The sparkling, glistening texture that it adds to the edges of the woman and the deer make it into a beautifully preserved moment. This slide was mounted in a gray Kodak heat seal cardboard mount with red edges, and is unfortunately unlabeled. 



This column combines a love of stereo photography with a fondness for 1950s-era styling, design and decor by sharing amateur stereo slides shot in the "golden age" of the Stereo Realist—the late 1940s through the early 1960s. From clothing and hairstyles to home decor to modes of transportation, these frozen moments of time show what things were really like in the middle of the twentieth century.

If you've found a classic '50s-era image that you would like to share through this column, please send the actual slide or a high-resolution side-by-side scan as a jpeg, tiff or photoshop file to: Fifties Flavored Finds, 5610 SE 71st, Portland, OR 97206. You can also email the digital file to strwld@teleport.com. If the subject, date, location, photographer or other details about your image are known, please include that information as well.

As space allows, we will select a couple of images to reproduce in each issue. This is not a contest—just a place to share and enjoy. Slides will be returned within 6 to 14 weeks, and while we'll treat your slide as carefully as our own, Stereo World and the NSA assume no responsibility for its safety.

STEREO WORLD

A Publication of
National Stereoscopic Association, Inc.



Volume 35, Number 1
July/August 2009

NSA Board of Directors

Larry Moor, *Chairman*
Andy Griscorn Brandt Rowles
Phyllis Maslin Al Sieg
William Moll Leonard A. Walle
Russell Norton Ray Zone

NSA Officers

Lawrence Kaufman, *President*
H. Lee Pratt, *Vice President*
Wolfgang Sell, *Vice President, Activities*
Ronald Gold, *Vice President, Development*
Carol Super, *Vice President, Development*
William Moll, *Treasurer*

Stereo World Staff

John Dennis, *Editor*
Lawrence Kaufman, *Contributing Editor*
Ray Zone, *Contributing Editor*
Mark Willke, *Art Director*
Sylvia Dennis, *Subscription Manager*
Toshi Dennis, *Member Services*

How to Reach Us:

NSA Membership
(New memberships, renewals & address changes)
P.O. Box 86708, Portland, OR 97286

**Questions Concerning
Stereo World Subscriptions**
P.O. Box 86708, Portland, OR 97286
e-mail: strwld@teleport.com

Stereo World Editorial Office
(Letters to the editor, articles & calendar listings)
5610 SE 71st Ave., Portland, OR 97206
(503) 771-4440
e-mail: strwld@teleport.com

Stereo World Advertising
(Classified & display ads)
5610 SE 71st Ave., Portland, OR 97206
(503) 771-4440
e-mail: strwld@teleport.com

(Insert flyers & auction ads)

Jeffrey Kraus
PO Box 99, Modena, NY 12548-0099
(845) 255-7913
e-mail: jkraus@hvc.rr.com

NSA Regions

Please contact your regional Director
for information about local events or
NSA activities. See current list at:
<http://stereoview.org/aboutnsa.html>

Stereoscopic Society of America

(Affiliated with the National Stereoscopic Association)
Les Gehman, *Membership Secretary*
3736 Rochdale Dr., Fort Collins, CO 80525
(970) 282-9899
e-mail: les@gehman.org

Stereo World on the Web
www.stereoview.org

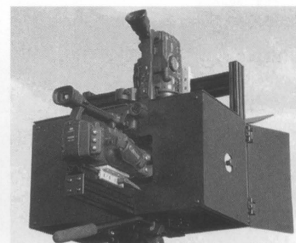
C O N T E N T S



Page 4



Page 14



Page 24

REGULAR FEATURES

2 Editor's View

Comments and
Observations
by John Dennis

4 The Society

News from the
Stereoscopic
Society of America
by Ray Zone

24 NewViews

Current Information
on Stereo Today
by David Starkman
& John Dennis

30 Classified

Buy, Sell, or
Trade It Here

2 Coming Soon to Stereo World

6 All Aboard the 3-D Train

by Lawrence Kaufman

7 Exploring Fundamentals of Digital 3-D Cinema

review by Ray Zone

8 The Iridescent World of Bi-colored Stereos

by Paula Richardson Fleming

14 Esotropia Revisited

Some Observations on Negative Parallax Viewing
of Stereo Images

by Ray Zone

16 Stereogram Variants

by J. Ronald Eyton

23 Sailing Away

UP Elevates Stereo Cinema

review by Ray Zone

26 PhotoHistory XIV

29 Size Matters in IMAX vs IMIN

Front Cover:

A tinted, bi-color tissue view of shells by Richard Harmer, published by the London Stereoscopic Company and illuminated from the back to reveal the intense colorization. More examples of his bi-color retinal rivalry images are seen in "The Iridescent World of Bi-colored Stereos" by Paula Richardson Fleming.

Back Cover:

A 1994 color infrared aerial hyper of the National Mall in Washington D.C. from the article "Stereogram Variants" by J. Ronald Eyton. Visible near the center of this image (behind the bulge in the sidewalk) is the Smithsonian Castle, the subject of an upcoming SW feature.

The National Stereoscopic Association is a non-profit organization whose goals are: to promote research, collection and use of vintage and contemporary stereoviews, stereo cameras and equipment, and related materials; to promote the practice of stereo photography; to encourage the use of stereoscopy in the fields of visual arts and technology; to foster the appreciation of the stereograph as a visual historical record.

Stereo World (ISSN 0191-4030) is published bimonthly by the National Stereoscopic Association, Inc., PO Box 86708, Portland, OR 97286. Entire contents ©2009, all rights reserved. Material in this publication may not be reproduced without written permission of the NSA, Inc. Printed in USA. A subscription to Stereo World is part of NSA membership.

Annual membership dues: \$32 third class US, \$44 first class US, \$44 all international memberships. Annual memberships include six issues of Stereo World, a plastic lorgnette viewer, and a membership directory.
Member, International Stereoscopic Union

EDITOR'S VIEW

Comments and Observations

John Dennis

Special Effects in 1856

Paula Flemming's feature in this issue, "The Iridescent World of Bi-colored Stereos," provides a wonderful look into the sort of experimentation and innovation that went on in the earliest days of stereographic publishing. While not all of Mr. Harmer's views produced quite the desired effect, many work well enough to still bring exclamations of wonder from those seeing them for the first time. The effect on the public of the 1850s, innocent of computer generated dinosaurs, cell phone videos or even the crudest of movie tricks, must have been considerably greater.

The use of retinal rivalry in stereoscopic imaging seems to

have been largely forgotten once actual color photography and mass market reproduction technology became practical, even though that would have allowed more precise control over the effects than simply turning the job over to often underpaid colorists ordered to accomplish it by hand. Many years later, our own Ray Zone was to make use of such rivalry in the 3-D Comic book medium for dramatic action effects that would have certainly surprised 19th century shell collectors.

The imagination of Hollywood publicists in coming up with attention-getting ways to grab public attention for upcoming movies remains healthy if the Disney "A Christmas Carol Train Tour" is any indication. Lawrence Kaufman's

brief description of the experience in this issue at least gives evidence that 3-D features are seen as well worth elaborate efforts and big investments, and that studios see 3-D films as seriously beginning to compete with *each other* for the same dollars. There's just one thing about this promotion. I can't seem to remember any trains in *A Christmas Carol*, not in the book or any of the movie versions. No scenes of Scrooge being greeted by Bob Cratchit at Victoria Station as he gets off the 8:12 from Basingstoke, no Thomas the Tank Engine aerial shots steaming through a picturesque countryside. The train tour is no doubt a great idea, but how much better it would have been to promote *Polar Express*! 🚂

Coming Soon to Stereo World

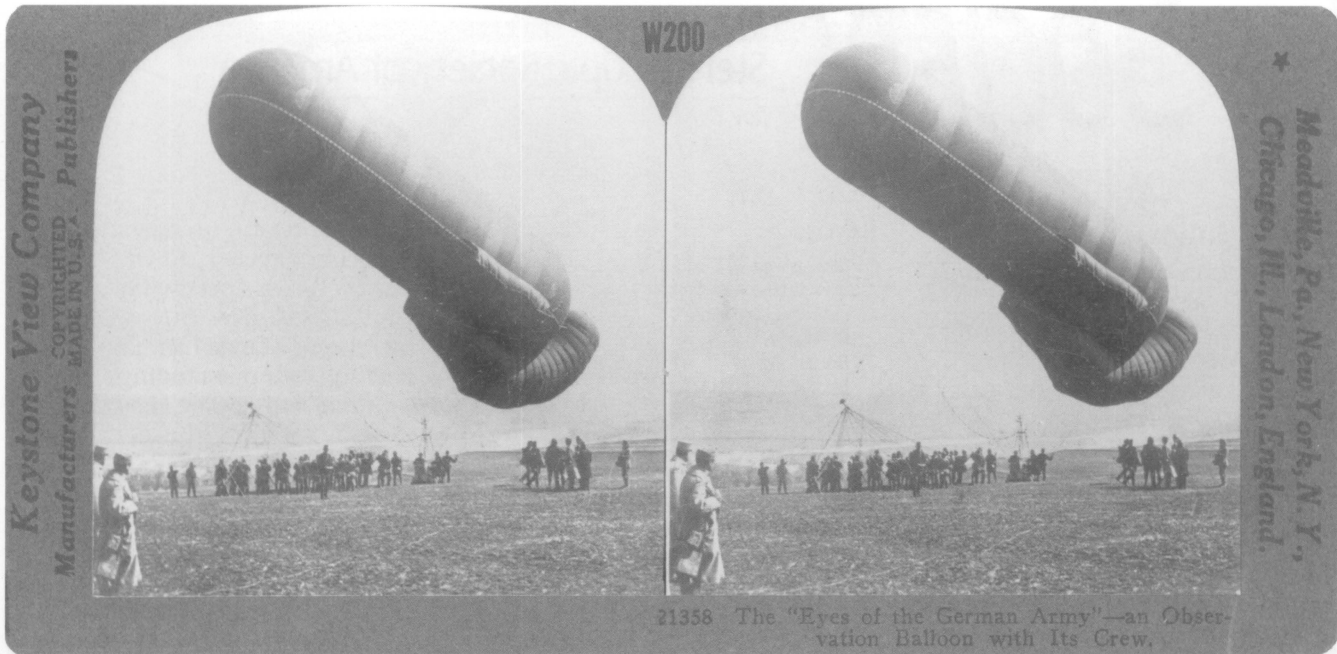
The Castle

As if it wasn't already a well known structure, the Smithsonian Castle on the National Mall is featured, rather imaginatively, in the recent comic adven-

ture movie *Night At the Museum - the Battle of the Smithsonian*. Articles by Richard Stamm with contributions from Paula Fleming covering the building inside and out through vintage stereos will appear

in upcoming issues of *Stereo World*. The image here is from a hand tinted London Stereoscopic Company view taken shortly after the museum's completion in 1855.





WWI Balloons

Ralph Reiley, with the help of Robert Boyd, presents another well researched article on stereoviews of World War One. This follows the features on tanks and aircraft, and like those very popular articles includes many rare German and French small format glass views as well as paper views from smaller publishers. Far from just showing blobs in the sky, these views include close-ups of balloons, crews and launching equipment as well as four amazing shots of balloons crashing to earth in flames.

Tractors

Several exceptional close-ups of equipment exhibited at Indiana's Tri State Engine and Tractor Show (now the world's largest gas engine and tractor show) appear in "Antique Engines and Tractors." The views were taken with a Loreo Lens attachment on a Cannon digital thanks in large part to inspiration Betty & Steve Drinkut found the previous month at the NSA convention in Grand Rapids, MI.

(Continued on page 26)



GONE MADDD

by AARON WARNER
3-D by Ray Zone



"DUDE! THESE 3-D BINOCULARS MAKE YOU
LOOK SO REAL!"



"DUDE! THESE 3-D BINOCULARS MAKE YOU
LOOK SO REAL!"

www.cartoonistothire.com

www.ray3dzone.com

Speedy Folios

Linda and David Thompson, Circuit Secretaries for the Speedy Folios, recently reported to all Speedy members. "It has been a great year for 3-D with all the movies and TV specials," wrote Team Thompson. "Just think we are still enjoying the earliest form of 3-D entertainment, stereo cards.

"We have seen some great 3-D in the folios and have added several new members to our groups. The folios are not living up to their name as they seem to take longer and longer to make their rounds. I know everyone's lives are very busy but let's try to live up to Bill Walton's rule and 'keep 'em moving.'

"Speedy Alpha is celebrating its 30th year. Many of you are charter members. Bill Walton got a great thing going in 1979 and we still have Alpha, Bravo, Keystone and Mike making their trip around the United States and Canada. Just a note to those who mail to Canada. We do not expect you to use priority rate as it is very expensive and we understand it taking a little longer to get across the border.

"We are listing the first three places in each folio for 2008 below. We have enjoyed being the Speedy Secretary for the last nine years and hope to continue. We enjoy seeing everyone's work. If anyone has any suggestions on making the folios even better or know of anyone interested in joining our group whether color or B&W please let us hear from you."

Alpha I

- 1 "Welcome My Son" by Philip Steinman
- 2 "Muir Woods National Monument" by Harold Jacobsohn
- 3 (Tie) "Seney's Rexall Drug" & "Barack & Hillary" by Ernie Rairdin

Alpha II

- 1 "Lost Dreams, Rhyolite, NV" by Linda Thompson
- 2 "Mitt Romney2" by Ernie Rairdin
- 3 "The Tennis Show" by Brandt Rowles

Bravo

- 1 "Beaver Pond, Lundy Lake" by David Thompson
- 2 "Fabulous Freesia" by David Kuntz
- 3 "Boots" by Harry Richards

Keystone

- 1 "Tobacco Farm" by Stan White
- 2 "Magnesia Springs (Then & Now)" by Harry Richards
- 3 "Pincushion" by Terry Wilson

Mike

- 1 "Night Blooming Cereus" by Terry Wilson
- 2 "Dining Room" by Harry Richards
- 3 "Mill South of Cambridge" by Stan White

Both the Speedy Keystone and Mike Folios showcase stereoview print cards that are black-and-white. A recent sample from the Keystone Folio is shown here. It is titled "Hanging Around" and it was shot by Harold Jacobsohn with twin Sony P200 digital cameras. "Everything really works together in this image," commented Keystone Folio member David Kuntz. "The deep shadows, the textures, the leafless tree limbs and the clouds. It's a great spooky effect." Phyllis Maslin wrote that it is a "wonderfully gruesome photo" and the "stark background makes it work even better."

Caprine Folio

Caprine Folio Secretary Thom Gillam recently sent in his annual report. "Once again this year has witnessed the departure of yet more members with no new members being added," wrote Thom. "Longtime members Bill Patterson and Tim White have withdrawn. We have greatly enjoyed their entries over the years and will all sorely miss their participation, inspiration, wit and wisdom. Dick Twichell remains on continued hiatus. Our active membership has dwindled to four.

"As it stands I do not have much hope that Caprine folio will survive, at least in its present form.

For some reason no new members are being directed our way—oddly, I just received Speedy Bravo which continues to grow (now at 12 members). Maybe I should consolidate the four outstanding folios into one and declare the circuit "Speedy Caprine"! I guess it is typical of the times that no one seems to want to commit to anything perceived as less than 'speedy.'

Voting Results for Caprine Folio 2008

"I have compiled the following votes for 2008. We had a three way tie for first! And another three way tie for Seventh (and a two way tie for tenth).

The top ten (well...eleven) include:

- 1 (Tie) "Misty Morning" by Tim White, CP-1, 40 points
"Crater Lake A & B" by John L. Baker, CP-1, 40 points
"Prince's Plume" by Quentin Burke, CP-5, 40 points
- 4 "Magic Wand - (4) views" by Bill Patterson, CP-1, 34 points
- 5 "Desert Blooms" by Quentin Burke, CP-7, 28 points
- 6 "Father and Son" by Quentin Burke, CP-6, 26 points
- 7 (Tie) "Torowep, AZ" by Quentin Burke, CP-6, 24 points
"View from the Room" by Thom Gillam, CP-5, 24 points
"Alp Glum" by Quentin Burke, CP-1, 24 points
- 10 (Tie) "The Excalibur - Dragon with Urchins" by Thom Gillam, CP-6, 22 points
"Crater Lake N. P. - Liz" by John L. Baker, CP-6, 22 points

New Letterbox Folio

Craig Daniels, Feline Print Folio Circuit Secretary, recently proposed the addition of a new postal-friendly folio to SSA called the Letterbox Folio. "Feline Circuit uses a variety of ways to produce print pairs from film and digital files," wrote Craig. "Besides simply having prints made and then trimming them for our viewcards, digital camera files can also be worked into print pairs using an ordinary computer and affordable or even freebie graphics programs.

"Considering the time, steep expense and learning curves required to maintain a well-cali-



"Hanging Around." by Harold Jacobsohn "This poor individual met his demise at the end of a rope. Fortunately he was left in place long enough for me to capture his final appearance in stereo." Sony Twin P 200 -.

brated color darkroom, one can argue that it's easier and cheaper today to produce consistently better color prints on your own (for stereo view cards), than it was 20 years ago. So even without film or the support of a stereo photo finishing service, print stereographers are in better shape than in the past.

"One problem for traditional print circuits is the cost in cash and time it takes to mail a folio. Anything 13 ounces or more means standing in line and paying a minimum of \$4.95. Feline, with its compact, lightweight folio gets away with paying that minimum. I propose the start of an ultra-lightweight SSA print circuit, to be called the Letterbox Folio, which would pay a lot less.

"The Letterbox Folio will be run much like Feline, but with our stereo pairs printed onto a single sheet of quality, foldable stationery — no sleeves, comments on the same page. An 8 to 16-member circuit might send their folio around in an ordinary 6 x 9 inch envelope for less than a dollar in postage — and no need to stand in line at the Post Office. Such a folio would easily fit through the slot where you get your mail."

Craig has proposed a standard of 7-inch-wide, tri-folded, 24# stock sheets and believes that "we'll have no overweight problems, even with a dozen or so members. At some point as the circuit

grows," he adds, "I might have to send everyone a supply of strong/reusable #10 envelopes."

"I really like the monolithic nature of these views," wrote SSA Treasurer Les Gehman. "It's very easy to create a double-sided sheet and trim it to size as you did. I think that we'll interest more people if they can avoid cutting and pasting views since that can get tedious and time-consuming."

So far the Letterbox Folio has seven members. If you're an SSA member interested in joining Letterbox and would like Craig to email you a PDF Template of the format, email Craig at view@peak.org

How to Contact the SSA General Secretary

Ray Zone is the General Secretary of the Stereoscopic Society and in that position is responsible for production of this column in *Stereo World* magazine and, according to the Membership Rules of the Society, is also "responsible for trying to keep the Society functioning effectively and harmoniously." Folio secretaries and any member of the NSA interested in the SSA is encouraged to contact Ray via email at r3dzone@earthlink.net.

How to Join the SSA

To join the SSA one must first, of course, be a member of the NSA. For placement in a stereocard, transparency or digital folio of their choice the new SSA member must send \$10 to Treasurer Les Gehman at the following address: Les Gehman, 3736 Rochdale Dr., Fort Collins, CO 80525, (970) 282-9899. Les can be reached via email at les@gehman.org. ☐☐

The Stereoscopic Society of America is a group of currently active stereo photographers who circulate their work by means of postal folios. Both print and transparency formats are used, and several groups are operating folio circuits to meet the needs in each format. When a folio arrives, a member views and makes comments on each of the entries of the other participants. His or her own view, which has traveled the circuit and has been examined and commented upon by the other members, is removed and replaced with a new entry. The folio then continues its endless travels around the circuit. Many long distance friendships have formed among the participants in this manner over the years.

Stereo photographers who may be interested in Society membership should contact the Membership Secretary, Les Gehman, 3736 Rochdale Dr., Fort Collins, CO 80525, (970) 282-9899, les@gehman.org

All Aboard the 3-D Train

by Lawrence Kaufman

Disney's *A Christmas Carol* Train Tour began its 41 city tour at Los Angeles' Union Station on Memorial Day weekend. This free behind-the-scenes event included a "state-of-the-art Digital 3-D Theater" offering a sneak peek at the Robert Zemeckis directed feature. Additional exhibits on display included artifacts from London's Charles Dickens museum, designs and props from the feature, making-of documentaries, interactive CGI scenes, live entertainment and more.

And Disney did what it does best, queued up a really long line that snaked it's way into the Train

exhibit. Shortly after it formed at 9 AM, there was already a two and a half hour line and by 10:30, attendees were in for a five hour wait. The 3-D theater preview looked great, but parking cost \$14.00 and time certainly is money. Free?—Bah Humbug! For more about the film and the complete tour schedule log onto www.christmascaroltraintour.com.

The train will make 40 stops in 36 states, as it travels more than 16,000 miles of track, finishing at New York's Grand Central Terminal over the weekend of Oct. 30th through Nov. 1st. Dolby Laboratories is supplying its Dolby 3D

Digital Cinema system for the traveling Digital 3-D theater (see SW Vol. 33 No. 5, page 22), and Barco is providing the DP2000 digital projectors.

Starring Jim Carrey, the performance-capture 3-D feature opens in theaters Nov. 6 in Disney Digital 3D and in IMAX 3D. One of the most lavish promotions for any 3-D film, the tour will include, among many other stops, Chicago July 24-26, New Orleans Aug. 7-9, San Antonio Aug. 14-16, Cleveland Sept. 18-19, Washington Oct. 2-4, Atlanta Oct. 6 and Jacksonville Oct. 20. 🎬



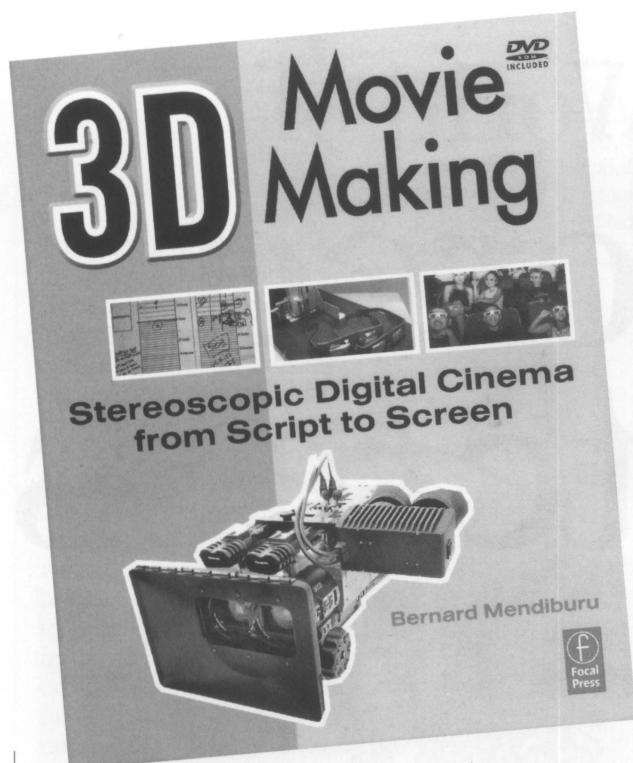
.....
Performers in period
costume entertain
those in the long lines
for the "Disney's A
Christmas Carol Train
Tour."
.....

Stereo by Lawrence Kaufman



.....
A sign updates the
growing wait time for
the exhibits and free
movie preview. At
upper right is the
portable 3-D theater
housing a Dolby digital
3-D system.
.....

Stereo by Lawrence Kaufman



Exploring the Fundamentals of Digital 3-D Cinema

review by Ray Zone

Books on stereoscopic cinema and 3-D production make up a very short list. With the proliferation of digital 3-D cinema theaters and over 25 stereoscopic feature films in production (as of May 2009), that is about to change. When a film is released in both 2-D and 3-D versions and the theaters showing the stereoscopic version comprise 30 percent of the total number of screens but bring in 70 percent of the box office receipts, you know there is an economic engine behind all the 3-D production. Additionally, there will soon be a simple “plug-and-play” solution for consumers to enjoy stereoscopic content on their 3-D-ready TV at home. This potentially huge aftermarket for theatrical 3-D content may prove to be the *sine qua non* for 3-D movies to become normative in the entertainment landscape. The day may be coming soon when a 2-D release to theaters is as frequent as a black-and-white picture is today.

Full disclosure: I wrote the Preface to this book. Further, as the author of two books on stereo cinema and a 3-D film producer, I was

happy to do so. But, in the interests of journalistic “objectivity,” let me reassure you that I will sound a few caveats about the present tome. And, speaking as a terminal bibliophile in all things 3-D, I can further reassure you that I have a ready familiarity with the aforementioned short list of books about stereo cinema.

3D Movie Making - Stereoscopic Digital Cinema from Script to Screen by Bernard Mendiburu is his first book. It has been launched into print by Focal Press, a publisher of books about motion picture production and post-production that are primarily technical in nature. Mendiburu’s book contains the requisite technical information about stereoscopic perception and its relation to cinema. But within its 200 pages the discussion is oddly eclectic in combining technical fundamentals with aesthetic considerations that are drolly observed. Most books about 3-D movies published so far have consisted either of exceedingly technical tomes filled with visual trigonometry or filmographic compendia of stereoscopic productions. University presses have also just begun publication of works addressing 3-D movies within the highly theoretical arena of post-structural discussion.

Two key technical books on the subject include *The Theory of Stereoscopic Transmission & Its Application*

to the Motion Picture by Raymond and Nigel Spottiswoode (University of California Press: 1953) and *Foundations of the Stereoscopic Cinema, A Study in Depth* by Lenny Lipton (Van Nostrand Reinhold: 1982). An exhaustive encyclopedia of stereo cinema is *3-D Movies, A History and Filmography of Stereoscopic Cinema* by R.M. Hayes (McFarland and Company: 1989) and a sophisticated post-structural tome is *Techniques of the Observer, On Vision and Modernity in the Nineteenth Century* by Jonathan Crary (MIT Press: 1992).

3-D movies have been a recurrent phenomenon throughout cinema history. Every thirty years a new wave of stereo cinema seems to take place. As a result, the technology and techniques for production and post-production have not become standardized, much less a common practice. Even consistent terminology for stereoscopy and its production principles haven’t been formulated. All of this, however, is now changing with the implementation of digital 3-D cinema and the universal adoption of 3-D TV in the home that is about to take place.

Another factor that has worked against a widespread understanding of stereoscopic vision and 3-D movie production is the fact that the practitioners of stereo have kept the “secrets of 3-D” very closely guarded, as if they were a

(Continued on page 28)

3D Movie Making - Stereoscopic Digital Cinema from Script to Screen

by Bernard Mendiburu, Focal Press 2009,
224 pps., paperbound, \$49.95
ISBN: 978-0-240-81137-6.

The Iridescent World of Bi-colored Stereos

by Paula Richardson Fleming

While trawling through stereos, the savvy collector is on the look out for production flaws—captions that don't match the images, mismounted prints or even two completely different images mounted on the same card. With tinted views, one also appraises the coloring. Is it beautiful? Mundane? Or ghastly? Sometimes the tinting differs between each half, which might be chalked up as shoddy workmanship resulting from a long day's work by a weary colorist. As with any errors, this can happen, but more frequently these cards are examples of rare and beautiful bi-colored views.

Early stereo photographers endeavored to record reality by developing new techniques, but capturing nature's colors, was not yet within their grasp. What technology could not accomplish, however, artistry could at least attempt. Many early photographers were trained artists, and as painting was an acceptable activity for Victorian women, there was a plethora of talent available to add nature's colors to monochromatic images. Iridescence however, that lustrous flickering of rainbow hues, was particularly difficult to render. This might not have been a concern except for contemporary interest in natural history, especially shells.



A.D. 1856 N° 2832.

Stereoscopic Pictures.

LETTERS PATENT to Richard Harmer, of 12, Princes Street, Spitalfields, in the County of Middlesex, Clerk, for the Invention of "IMPROVEMENTS IN STEREOSCOPIC PICTURES."

Sealed the 29th May 1857, and dated the 29th November 1856.

PROVISIONAL SPECIFICATION left by the said Richard Harmer at the Office of the Commissioners of Patents, with his Petition, on the 29th November 1856.

I, RICHARD HARMER, of 12, Princes Street, Spitalfields, in the County of Middlesex, Clerk, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN STEREOSCOPIC PICTURES," to be as follows:—

My Invention relates to colouring stereoscopic pictures, that is, pictures to be viewed in the stereoscope produced by the camera or any other means, the same being printed on paper chemically prepared, by the agency of light or otherwise, as usual.

In pictures viewed in the stereoscope two similar pictures are introduced to produce one view, which two pictures heretofore have been exactly similar in every particular in color and outline, or as nearly so as may be, whereas according to my Invention I produce and use two pictures in the ordinary way, similar in outline but different in colour. For example, one picture may

Fig. 1. Page one of Richard Harmer's 1856 patent application for bicoloration of stereo photographs.

Naturalists such as Charles Darwin, Alfred Russel Wallace and Thomas Henry Huxley made expeditions to the far corners of the world, returning with amazing biological specimens, many of which were deposited in museums. In 1866 Hugh Cuming, an eminent English conchologist, eventually sold his collection of nearly 83,000 shells to the Natural History Museum (British Museum). These beautiful natural objects could be viewed in person only if one belonged to a naturalist society, or fortunate enough to live near a museum. Like photographic "travel" to far-off places one might never visit, acquiring stereos of rare natural objects at least allowed the viewer some access to these wonders. If only their color was more realistic. This problem of coloration was tackled by Richard Harmer in 1856.

In the 1850s, Harmer is listed as a clerk living in Spitalfields (London). He was also a photographer and probably an artist or illustra-

Fig. 2. Page four of Harmer's patent application illustrating his technique. Only the original application was hand colored, but the line drawing identifies Harmer as the photographer of many of the tinted stereoviews of shells which are not otherwise credited.

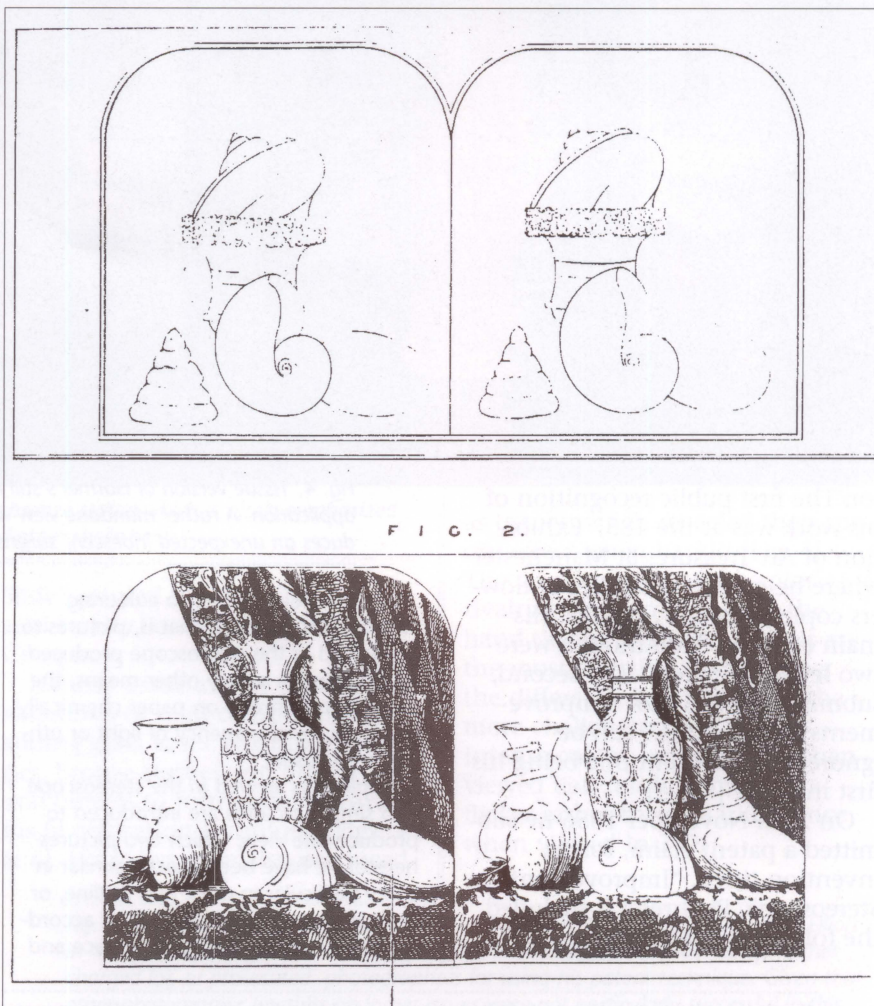


Fig. 3. Bicolored stereoview matching Harmer's patent application, it carries the Royal Warrant and London Stereoscopic Company blindstamp, ca. 1857. The deep colors of the shells tend to flicker when viewed in 3-D rather than blend together in an iridescent effect.



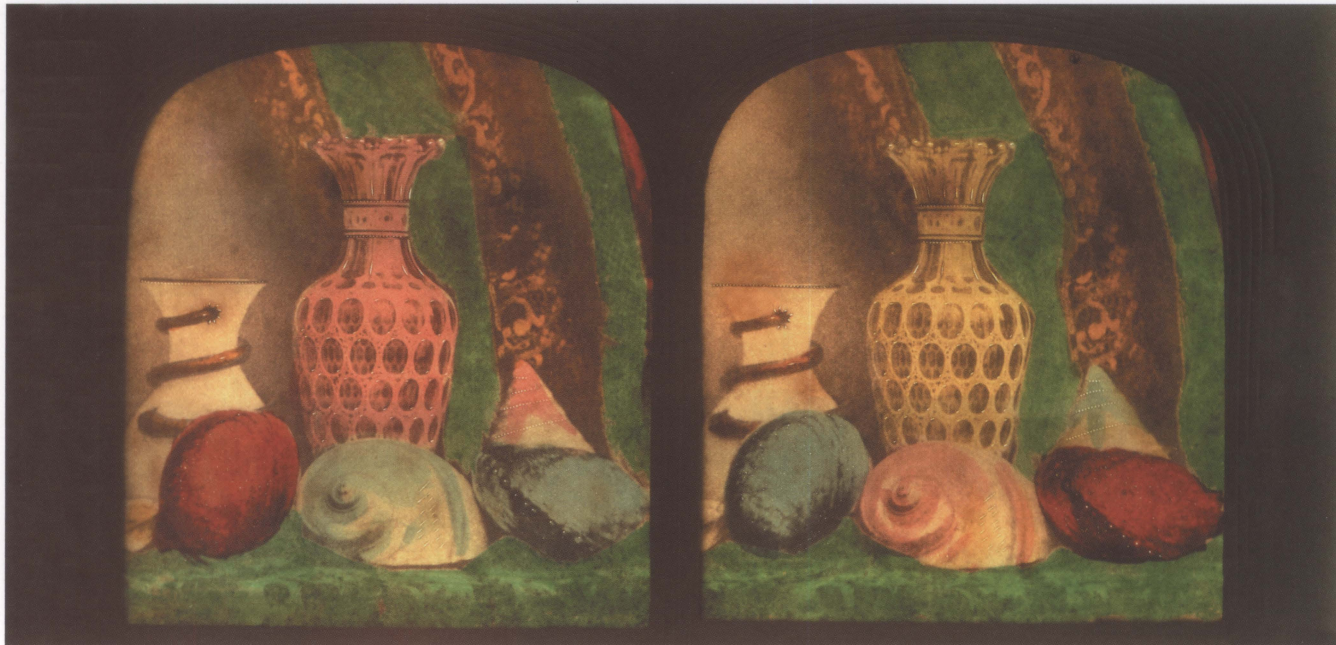


Fig. 4. Tissue version of Harmer's still life composition (Fig. 3.) used in his patent application. A rather mundane view without color, which when backlit as here produces an unexpected iridescent surprise.

tor. The first public recognition of his work was at the 1857 Exhibition of Art Treasures at Manchester where he exhibited studies of flowers copied from engravings. His main claim to fame though were two letters of patent. The second, submitted in 1857 for "improvements in cigarettes," can be ignored, the relevant one being his first in 1856. [Fig. 1]

On 29th November 1856 he submitted a patent claim, for an invention titled, "Improvements in Stereoscopic Pictures." It included the following specifications:

My Invention relates to colouring stereoscopic pictures, that is, pictures to be viewed in the stereoscope produced by the camera or any other means, the same being printed on paper chemically prepared, by the agency of light or otherwise, as usual.

In pictures viewed in the stereoscope two similar pictures are introduced to produce one view, which two pictures heretofore have been exactly similar in every particular in color and outline, or as nearly so as may be, whereas according to my Invention [sic] I produce and

use two pictures in the ordinary way, similar in outline but different in colour. For example, one picture may be colored emerald green and carmine, and the corresponding picture used therewith may be coloured blue and violet, which colours, when viewed in the stereoscope, blend with each other, and greatly enhance the effect.

Any other colours may be used, and if selected and used with judgment produce beautiful effects in such pictures.

Harmer's application included two line drawings based on his stereos of shells. The second figure

Fig. 5. Another composition of shells by Harmer published by the London Stereoscopic Company ca. 1857. The subtle tinting of shells in this card is easier to view.





Fig. 6. In this composition, Harmer adds a bronze statue which is nicely emphasized by tinting that is especially effective in the lighter shells here.

was colored according to his specifications in the original application. [Figs. 2 & 3]. His patent made use of retinal rivalry, a phenomenon in which visual perception alternates between different images presented to each eye. In this case, binocular color rivalry, where each eye sees a different color. Harmer's application was approved and sealed on the 29th of May, 1857. After this date his mounts change from dull gray to black carrying the royal warrant with the series title, "The Bicolored Stereoscopic

Slide" printed in gold. They were sold by the London Stereoscopic Company.

Harmer made a large number of variations of shell compositions, adding glass vases, luxurious fabrics, bronze statues and other natural objects to further demonstrate his bi-coloration technique [Figs. 5 & 6]. His views were also produced

as tissues which revealed their special effect when backlit [Fig. 4]. The visual impact of the color rivalry is enchanting when the hand tinting is perfect. Pastels are the most effective as the deeper the difference is in intensity, the more challenging it is to view. Intense colors, while lovely when viewed flat, result in more of a flicker rather than an iridescence when viewed in 3-D.

Fig. 7. Still life of shells, coral and flowers in a lustrous vase, possibly by James Elliott in the late 1850s. No reference has yet been found suggesting that Harmer either charged for, or prosecuted photographers for using his patent technique. Given that other photographic lawsuits on larger issues were not particularly successful in this era, perhaps it wasn't worth his effort.

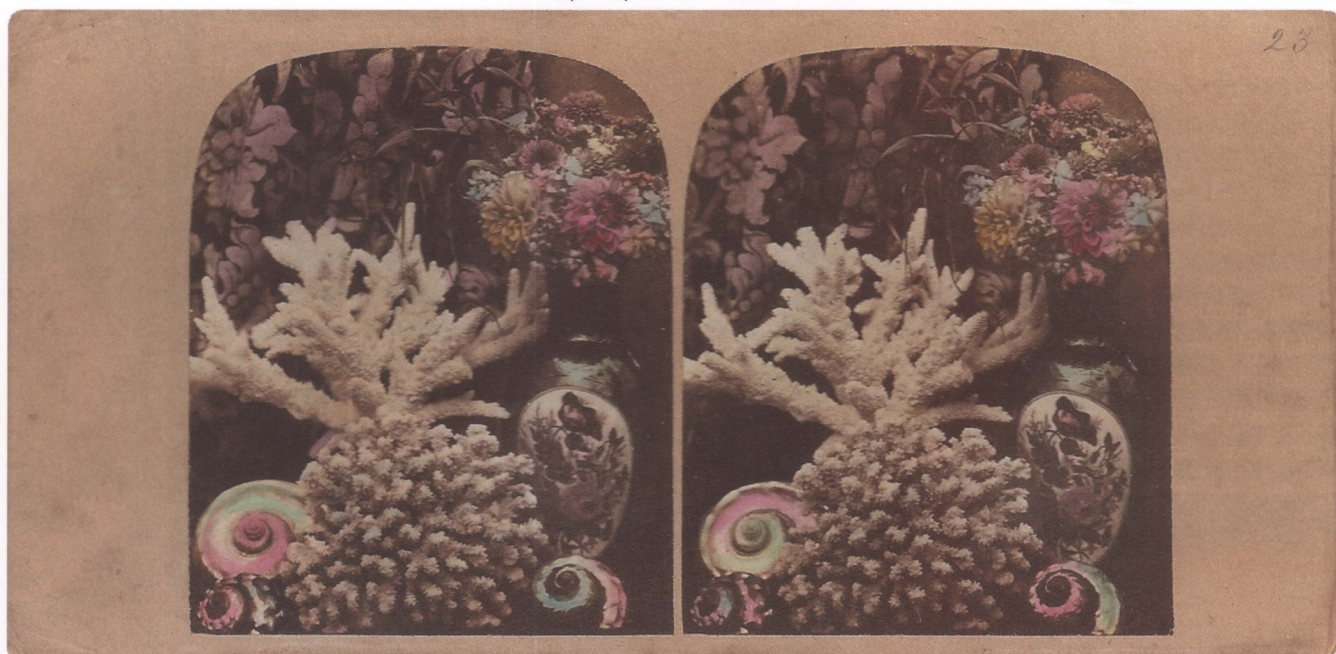




Fig. 8. Predating Harmer, Jules Duboscq used bicoloration in this lithograph to depict the marble of one of Guillaume Coustou's sculptures known as the "Marly Horses."

Although Harmer patented his technique, other photographers also produced bi-colors [Fig. 7]. In fact, the French produced them before Harmer. In the early 1850s Jules Duboscq issued a series of lithographs of drawings on black backgrounds, one of which [Fig. 8] depicts half of Guillaume Coustou's pair of marble sculptures known as the "Marly Horses." In this card, Duboscq enhanced the marble affect by printing the figure in one half blue against a stark white horse, and a pink figure and light gray horse in the other. A bronze

statue of "Clovis and Alaric" is rendered more realistic by an anonymous photographer's use of coloration [Fig. 9]. Another photographer used differing colors to illustrate "shot silk," a fabric whose iridescence is caused by different colored warp and weft threads [Fig. 10]. Around this same time, James Elliott published what I consider to be the most beautiful bi-colored still life [Fig. 11]. His composition recalls classic paintings and the

tinting is both delicate and very effective.

After his 1857 bi-coloration patent, Harmer's photographic activities appear to diminish. Minor references to his work surface in the *Photographic News*. In 1862 he exhibits chromo-photographs at the London International Exhibition. The last references I have so far located for him relate to his attendance in 1863 to various meetings of the London Photographic Society. Indeed by 1869 Harmer and his patent are

Fig. 9. In this anonymous view of a statue of "Clovis and Alaric," bicoloration has been used to suggest bronze.





Fig. 10. The iridescence of "shot silk" fabric is cleverly illustrated by bicolored tinting of a dress in this anonymous 1850s view.

nearly forgotten. In that year, Col. Sir Henry James writes a letter to the *Atheaneum*, which is republished in the October 1st issue of the *Photographic News*, concerning an interesting affect he has "discovered" whereby each half of a stereo card is tinted differently. He further adds, "This is so very obvious a method of colouring stereoscopic views that I can hardly imagine it has not been tried before, and yet I can scarcely fancy that it has been, and that I should not have heard of it and seen some specimens of it." An Editor, proba-

bly George Wharton Simpson, publishes a reply noting Harmer's patent and agreeing that, "the effect is very pretty and interesting, and it is somewhat surprising that it has not been more frequently practised."

The next issue of the *Photographic News* contains more letters on bi-colored stereos, one of which mentions Harmer's shells although he is not credited. From this date Harmer appears to vanish from the

photographic scene. He may have died, or perhaps his patent for an improvement in cigarettes diverted his attention from photography. At least now when examining stereos and a curiously tinted one turns up, we no longer need to decry the colorist and can remember Richard Harmer as the man who capitalized on binocular color rivalry. ☞☞

Fig. 11. A very classical 1859 still life composition by James Elliott is beautifully enhanced by subtle bicolored tinting.



Esotropia Revisited

Some Observations on Negative Parallax Viewing of Stereo Images

by Ray Zone

With the help of Takayuki Oguchi, Takashi Sekitani and Andrew Woods, frames from the 1986 film which allegedly created a permanent cross-eyed condition in a Japanese child 4 years and 11 months old have been located. The case study was originally reported in the 1988 paper by Soichi Tsukuda and Yasuichi Murai, "A case report of manifest esotropia after viewing anaglyph stereoscopic movie," published in the Japanese Orthoptic Journal (Vol. 18, pp.69-72) in 1988. A pdf of this paper in Japanese is downloadable from www.ray3dzone.com/Tsukuda.pdf.

Readers are referred to the article "Perceptual Paradoxes" from the May/June 2009 issue of *Stereo World* (Vol. 34 No. 6) for background discussion on the Tsukuda and Murai paper and the circum-

stances that brought it to light.

The film in question was a 14-minute short anaglyph cartoon animation directed by Masuji Harada and produced by Shinei Animation. Its title would roughly translate to "Ghost Q-taro, Popup BakeBake big command" in English. Anaglyph film frames were reproduced in an 8-page story in a magazine titled *Corocoro-Comic Deluxe* issue number 14 (April 22, 1986) published by Shogakukan. Anaglyph glasses were bound into the publication and an illustrated tutorial about 3-D was included along with a photo of the magazine's staff posing with 3-D glasses.

If the film frames as reproduced in *Corocoro-Comic Deluxe* are an accurate indication, there is no use of behind-the-screen imagery with positive parallax. The background

image, or infinity, showing a street or scene from nature, is set at the stereo window. Two levels of depth push forward from the window in negative parallax off the screen or (in this case) the page.

That would mean that the young child viewing the anaglyph cartoon could have been in a negative parallax condition with eyes crossed for 14 minutes. If the projected anaglyph cartoon was sufficiently magnified on screen, it may well have been the case that the limits for the "binocular safe viewing zone" mediating vergence and accommodation (focus) were exceeded.

"If we can get our panel of experts to view it [the cartoon] as it was presented to that child," wrote veteran stereoscopist John



Cover of the 3-D issue of *Corocoro-Comic Deluxe*, April 22, 1986.

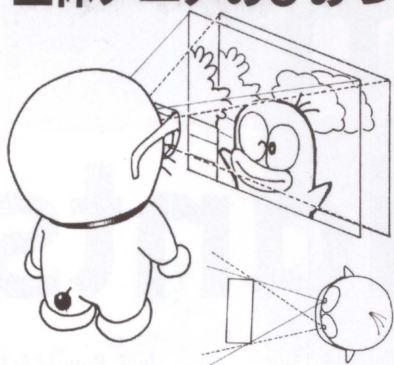


Anaglyph glasses bound into the 3-D issue of *Corocoro-Comic Deluxe*.

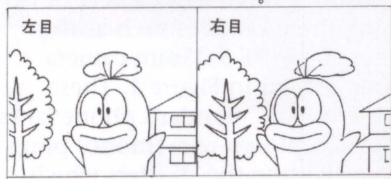


Title page of the 8-page story about the cartoon in *Corocoro-Comic Deluxe*.

立体アニメのひみつ



人間の目の仕組みを立
体として表現するこ
とができるのは、同じ
ものを右と左の目から
それぞれちがう角度から
見ているからなのです。
立体アニメはそれを
用いたもので、赤と青の
色で描かれた画を同
時に見せ、片方ずつ赤
と青のセロハンを通し
て見るため、右と左で
はちがう絵を見ること
になり、目のさか
くにより画面に立体感
が生み出れるのです。

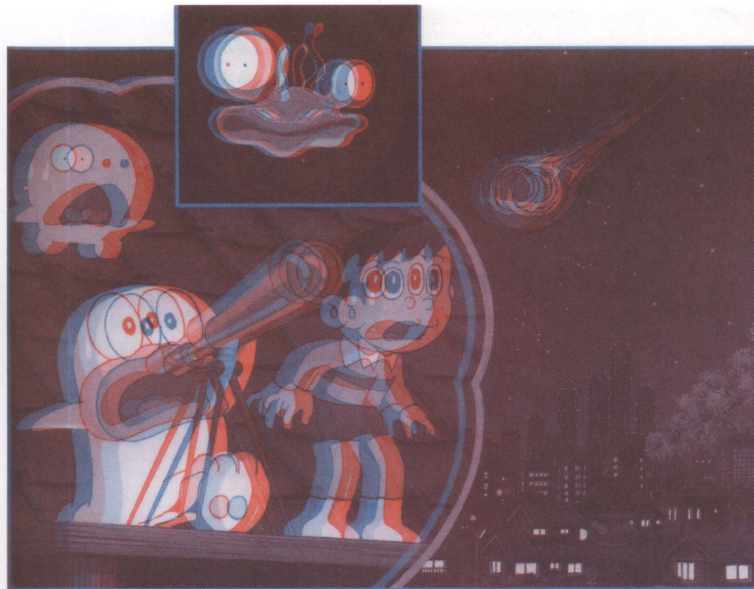


A tutorial in 3-D viewing included in the anaglyphic issue of Corocoro-Comic Delux.

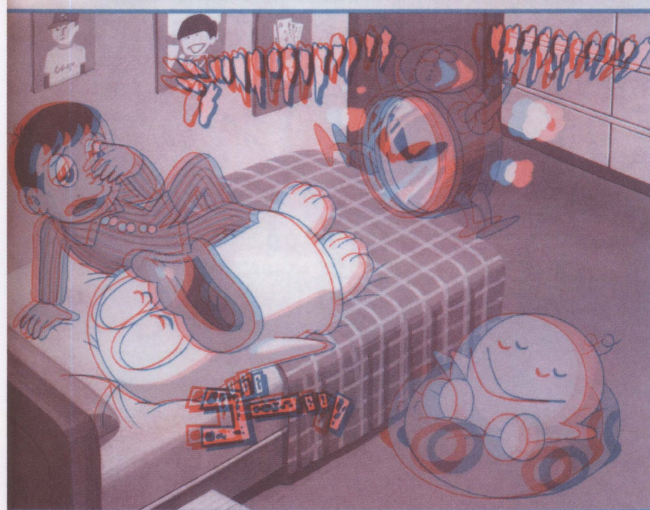
Merritt in an April 12, 2009 email to the author, "then we will have some basis for rebuttal. If we cannot, then given the fact that stereo is so frequently afflicted with malpractice, no one can say that a correctly presented stereoscopic video at a large cinema venue (where the screen is well over 2 meters away and focus/fixation mismatch is limited to less than 1/2 diopter) can cause permanent visual problems."

Nick Holliman, a vision scientist and one of the Co-Chairs along with Merritt and Woods of the annual Stereoscopic Displays and Applications Conference, has made considerable study of the vergence/accommodation (AC) issue. "In most cinema/theatre situations," wrote Holliman in an April 13 email, "I suspect that accommodation/vergence conflict is not a problem. This is because beyond 2 meters (1/2 diopter) the eye is effectively focused at infinity. Therefore as long as 'stereo moments' in films do not come closer than 2m to the viewer there

(Continued on page 28)



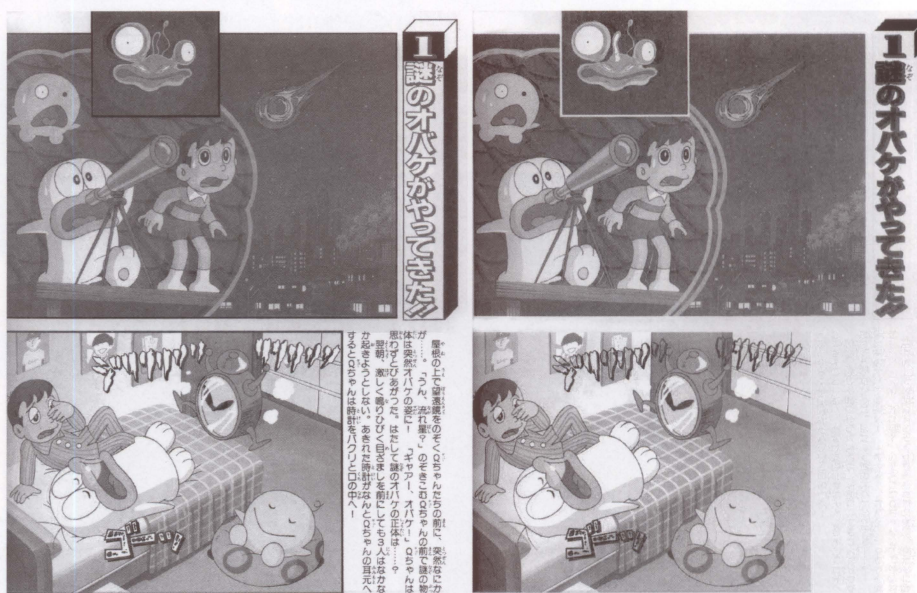
1 謎のオバケがやってきた



屋根の上で望遠鏡をのぞくQちゃんたちの前に、突然にカ
ガ……。うん、流れ星？のそきこおQちゃんの前で謎の物
体は突然オバケの姿に！「ギヤア、オバケ」Qちゃんは
思わずとびあがった。はたして謎のオバケの正体は……？
翌朝、激しく鳴りひびく目ざましを前にしても3人はなかな
か起きようとしな。あきれた時計がなんとQちゃんの耳元へ
するとQちゃんは時計をバクリと口の中へ！

(62)

Page 1 of the anaglyphic article in Corocoro-Comic Delux.



Page 1 of the article as separated into black and white pair format by Andrew Woods.

Stereogram Variants

by J. Ronald Eyton

There are many variations of the simple two-camera (or two-lens) stereogram either in terms of the number of cameras (or lenses) used to acquire 3-D images, or in terms of the techniques used to process the resulting stereo image pairs. Presented here are half a dozen of my favorite stereogram variants that range from a three-camera double stereogram, a two-camera vertical panoramic stereogram, a one-camera motion parallax stereogram, simulated infrared stereograms (black & white and color infrared), image effect stereograms (charcoal/pencil and level slicing), to stereograms created from USGS overlapping digital aerial photographs. While most of the techniques used to produce these stereograms are visually self-evident and require only a brief description of the methodology, I have included more lengthy explanations where needed.

Double Stereogram

Double stereograms can be created using a three-lens camera or by using three cameras such as the three Ricoh FF-9 35mm camera setup shown in Figure 1. These cameras have standard phone jacks that accept two-wire (mono) plugs for activating the shutters which can be triggered when connected to a momentary on-off push button switch. The principal advantage of a double stereogram is that the complete scene captured by the center camera can be displayed with one half of the left camera image and one half of the right camera image on each side of the center image to create two side-by-side stereograms. The cameras are mounted so that they shoot in portrait mode and image processing then simply involves clipping the appropriate left and right camera image halves and moving them to align up with full center scene to produce a left stereogram and a right stereogram. The main disadvantage of the double stereogram is that the final image needs to be printed as an 8 x 10 image or larger (Figure 2).

Vertical Panoramic Stereogram

Figure 3 shows a two-camera system, using a pair of Pentax Optio 430 RS digital cameras, used to take very slightly overlapping (about 15%) digital images that can then be "stitched" to form a panorama. Construction details are given in my article *Panorama Mania* published in Nuts and Volts Magazine, Vol. 27 No. 6, 2006, p 38-41.

Figure 1. Three-camera system used to produce the double stereogram shown in Figure 2.

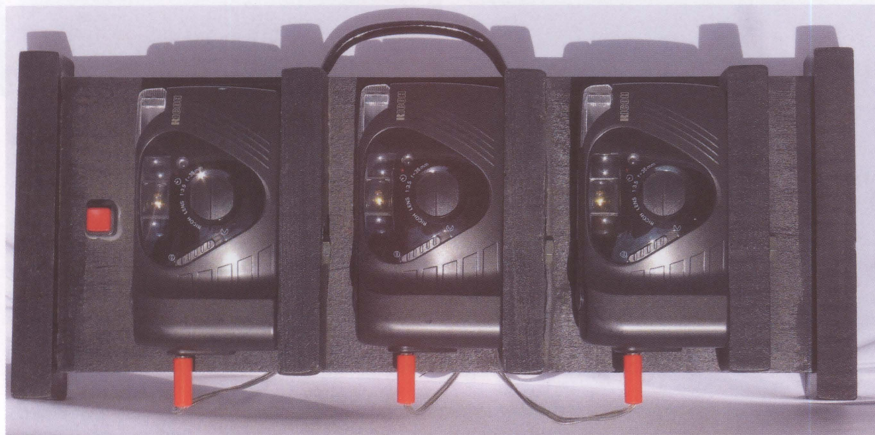




Figure 2. Double stereogram of Leaping Rock in the Pipestone National Monument, Minnesota.

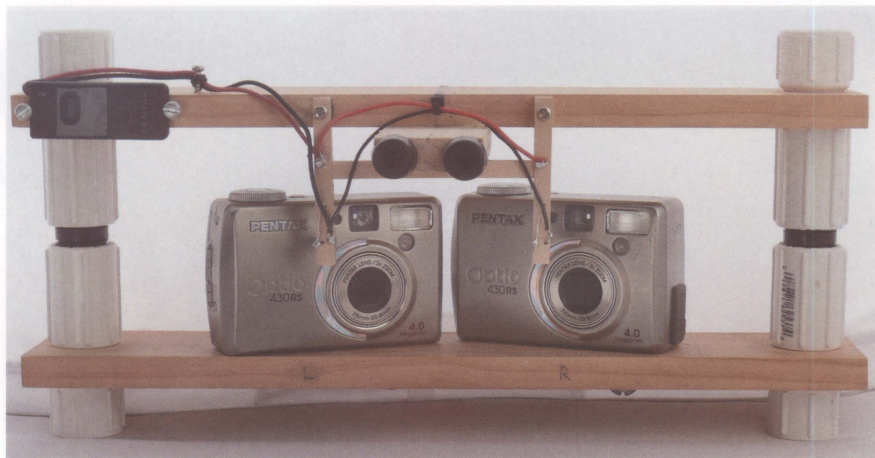


Figure 3. Two-camera panoramic system used to produce the side-step vertical panoramic stereogram displayed in Figure 4.



Figure 4. Vertical panoramic stereogram of the grain elevators in Lake Benton, Minnesota.

If the entire camera system is rotated 90 degrees it can then be used to capture a vertical panorama of very tall subjects. By using the "shifting your weight from one foot to the other" method of producing a stereo pair and by keeping the camera system in the same vertical alignment one can, with practice, capture two panoramic images that will produce a decent vertical panorama stereogram. The example shown in Figure 4 consists of two slightly overlapping images stitched to form the left side of the stereogram and two slightly overlapping images stitched to form the right side of the stereogram. I often shoot half a dozen (3 left, 3 right) panoramas in order to get the best two needed to produce the stereogram.

Motion Parallax Stereogram

How about a stereogram made from images using a single stationary camera that is focused on a moving target? Figure 5 shows such a stereogram made from a camera mounted on a tripod and shooting a sequence of images at about one frame per second. In this example the train in the picture was initially stopped some distance down the track and moved quite slowly toward me before picking up speed. The camera was aimed at about a 45 degree angle to the track direction so there is an obvious change in the train's scale from one sequential picture to the other. Ideally the camera should be positioned with a 90 degree line of sight to the motion of the object, however at 45 degrees with the slow moving train the change in position (and size) is small and the resulting sequential images are relatively easy to fuse into a 3-D effect. Everything else in the scene (foreground and background) does not change position or size from one picture to the other and will appear to have no depth—only the moving object will exhibit relief.

Simulated Infrared Stereograms

A number of stereo enthusiasts like to shoot infrared pictures but the investment in either darkroom equipment (or the time involved) for developing infrared film, or the cost of acquiring digital cameras altered so that they are infrared sensitive, is prohibitive. A simple way to convert any normal color stereogram into a black & white infrared stereogram can be found in the Paintshop Pro Photo X2 software under the *Effects* menu. Selecting *Photo Effects/Infrared Film* and setting the parameters *Strength: 95*, *Flare:10*, and *Grain: 1* will produce the black & white infrared stereogram shown in Figure 7a from the normal color stereogram (FALLS.jpg) shown in Figure 6. The parameters shown above are starting points only. Further manipulation (contrast, gamma, sharpening etc.) of the simulated black & white infrared image may improve the final result.

A simulated color infrared stereogram (Figure 7b) can also be created using the RGB color separations derived from the normal color stereogram (Figure 6) and the black & white simulated infrared stereogram (Figure 7a). The processing steps using Paintshop Pro Photo X2 are as follows:

1. Open the normal color stereogram file FALLS.jpg.
2. Under the *Image* menu select *Split Channel/Split to RGB*.
3. Delete the Blue1 file.
4. Save the Green1 file as FALLS_G.jpg and the Red1 file as FALLS_R.jpg.
5. Open the simulated black & white infrared file FALLS_IR.jpg.
6. Under the *Image* menu select *Combine Channel/Combine from RGB*. Assign FALLS_IR.jpg to the Red channel source. Assign FALLS_R.jpg to the Green channel source. Assign FALLS_G.jpg to the Blue channel source.
7. Under the *Adjust* menu select *Smart Photofix*. Adjust the *Brightness* (use suggested settings), *Saturation* (use 50), and *Focus* (use suggested settings) as indicated in the parentheses to start with.
8. Save as FALLS_SCIR.jpg



Figure 5. Motion parallax stereogram of a freight train coming into San Marcos, Texas. [The technique produces surprising results with a subject on a slowly turning piano or bar stool in an otherwise static room.]

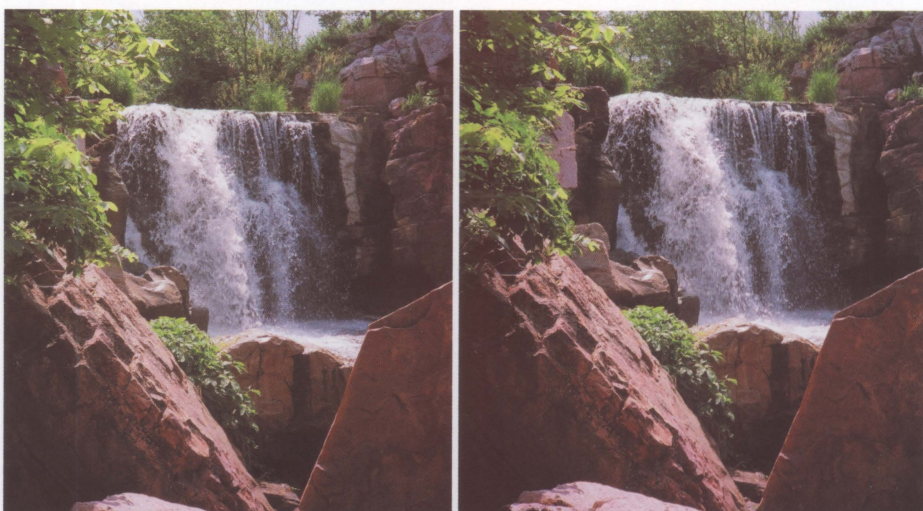


Figure 6. Normal color stereogram of Winnewissa Falls in the Pipestone National Monument, Minnesota used to produce the simulated infrared stereograms in Figures 7a and 7b.



Figure 7a. Black and white simulated infrared stereogram extracted from the normal color stereogram (Figure 6.) using the photo effects/infrared film algorithm in Paintshop Pro Photo X2.



Figure 7b. Simulated color infrared stereogram using the red and green image separations from the normal color stereogram (Figure 6.) and the simulated black and white stereogram (Figure 7a.) to form a composite (see text for processing steps).



Figure 8a. Normal color stereogram of the Redwood Falls, Minnesota golf course used to produce the stereogram shown in Figure 8b.

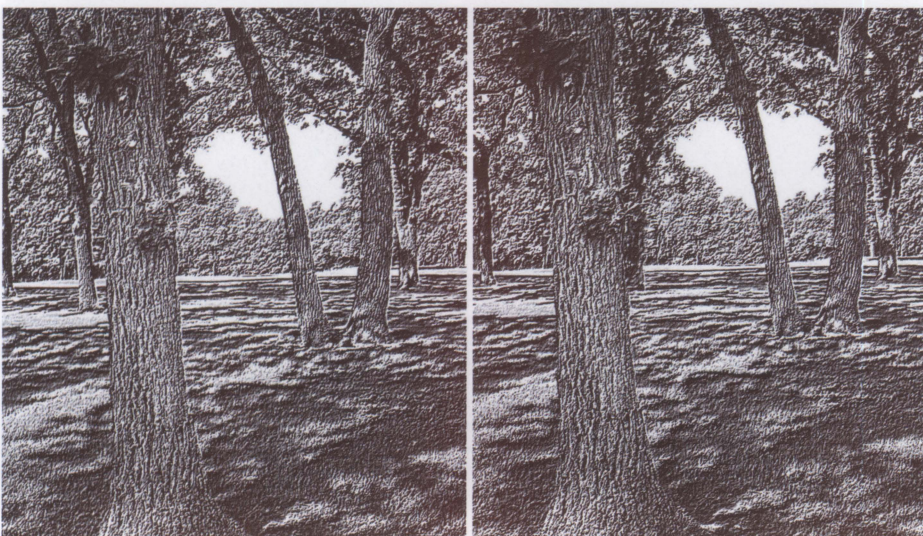


Figure 8b. The art media effects (pencil and charcoal procedures) in Paintshop Pro Photo X2 were used to produce this stereogram from the image shown in Figure 8a.

Image Effect Stereograms

A number of stereo photographers like to produce stereogram variants using "effects" algorithms available in their image processing software. Two of my favorites are conversions using a media effect such as a combination of charcoal and pencil drawing, and an artistic effect called level-slicing or posterization.

The *Black Pencil* and *Charcoal* options under the *Effects/Art Media Effects* menu in Paintshop Pro Photo X2 were applied to the normal color stereogram (Figure 8a) and "played with" until a satisfactory rendition was produced (Figure 8b). There is no way I can list all of the steps used for the many iterations of this process. "Play" until you get a satisfactory result according to your taste and standards.

Level slicing or posterization reduces the number of colors that are possible (but not necessarily present) in an image. A two-level slice will yield a possible $2^3 = 8$ colors (Red, Green, Blue, Cyan, Magenta, Yellow, Black, White). A three-level slice will produce a possible $3^3 = 27$ colors (R, G, B, C, M, Y, BK, WH, DR, DG, DB, DC, DM, DY, LR, LG, LB, LC, LM, LY, ORANGE, LIME, PINK, PURPLE, AQUA, TURQUOISE, and GRAY—where D=Dark and L=Light). A four-level slice and a five-level slice will produce a possible $4^3 = 64$ colors and $5^3 = 125$ colors respectively. Level slicing usually increases the contrast and saturation of a scene, but to produce a truly poster-like image the number of slices should be kept to 2, 3 or 4. Figure 9a shows a normal color stereogram and Figure 9b shows the 3-level sliced stereogram derived from it using the *Posterize* option under the *Effects/Artistic Effects* menu in Paintshop Pro Photo X2.

USGS Digital Aerial Photograph Stereograms

Stereograms created from overlapping aerial photographs were often the mainstay of intelligence operations conducted during the Second World War and are still being used today for reconnaissance purposes, albeit from digital imaging systems. Stereo aerial photography was the backbone of the USGS topographic mapping program and was also extensively used for earth resources investigations. Two programs might be of interest to individuals wanting to construct a stereogram from aerial photographs. The National High-Altitude Photography or NHAP (1980-1989) Program and the National Aerial Photography Program or NAPP (1987-present) are archived by the USGS in a digitally scanned format with images available online for downloading at no cost for medium resolution data. The two overlapping aerial photographs shown in Figure 10a (see next page) were obtained using the USGS Earth Explorer at <http://edcns17.cr.usgs.gov/EarthExplorer>. Higher resolution scanned images of these same scenes can be ordered at a cost of \$30.00 for each photograph.

The left and right images that comprise the stereo pair must be cut or clipped with long side of each of these images perpendicular to the flight line. For north to south, or south to north flight lines the photos must be rotated 90 degrees (see Figure 10b). Figure 11 shows the stereogram created from the cutouts (clips) of the bottom airphoto configuration shown in Figure 10b. A detailed explanation of the process can be found in *Fundamentals of Remote Sensing and Airphoto Interpretation 5th edition* by T. E. Avery and G. L. Berlin, Prentice Hall, 1992, p. 67. The USGS archives cover most of the U.S.A. and can be used to find aerial photographs of your hometown, farm, or favorite state or national park. 📷



Figure 9a. Normal color stereogram of the brook in the Pipestone National Monument, Minnesota.



Figure 9b. A three-level sliced image (resulting in 27 possible colors) was extracted from Figure 9a to produce the posterized stereogram shown here.

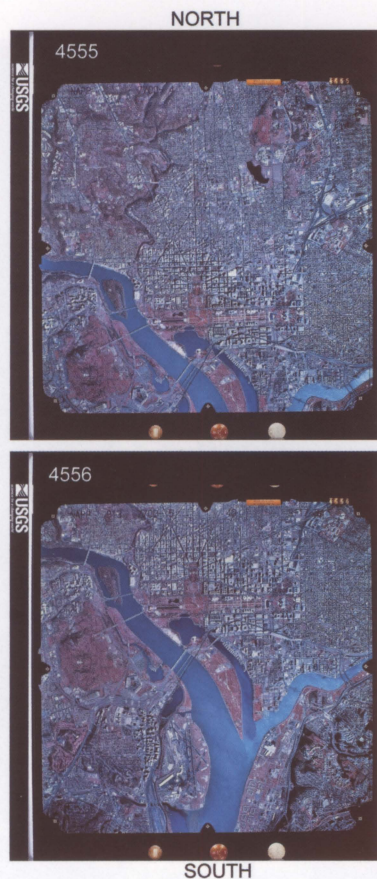


Figure 10a. Two sequential overlapping color infrared aerial photographs from a north to south flight line obtained over Washington, D. C. March 17, 1994.

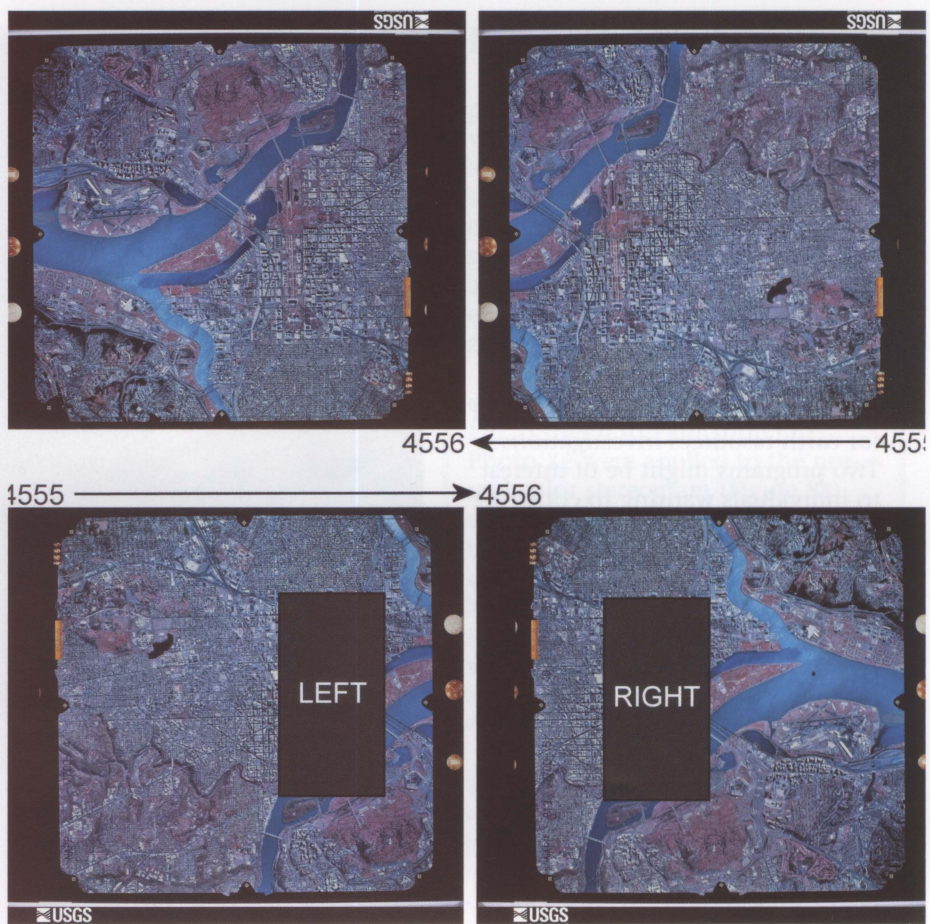


Figure 10b. The two sequential photos from Figure 10a oriented in the two west-east configurations before clipping out two similar areas from the bottom layout to produce the stereogram shown in Figure 11.



Figure 11. The Washington D.C. aerial hyper stereogram extracted from Figure 10b.

Sailing Away: *UP* Elevates Stereo Cinema

review by Ray Zone

Stereo cinema continues to evolve with new narrative grammar in the computer-generated (CG) realm with feature films such as *UP*, released by Pixar/Disney on May 29 in about 1500 digital 3-D cinema theaters (2200 showed it flat). Joshua Hollender, stereoscopic supervisor, and the team at Pixar rendering the spatial version of *UP*, made dynamic use of the z-axis to change the depth according to the emotional needs of the story.

Accordingly, *UP* marks a watershed in the evolution of stereoscopic cinema with a new, subtler use of the z-axis for storytelling purposes. This may be because Pete Docter and Bob Peterson, co-directors of the film, who also dreamed up the story of a grouchy, 78-year-old man who sets forth on an aerial high adventure by launching his house with over 20,000 helium balloons, made the story work. In fact, to study subtle 3-D, Docter and Petersen made a point of viewing the restrained but striking stereo in Alfred Hitchcock's 1954 3-D classic, *Dial M for Murder*.

In a *Los Angeles Times* interview with Susan King, Docter emphasized the importance of an "emotional foundation" with the characters "no matter what technology

you use," and noted that "The 3-D is just another crayon in the crayon box." In telling the story of 78-year-old Carl Fredericksen (Ed Asner) and his unlikely friendship with Russell (Jordan Nagai), the eight and a half year old wilderness scout who has stowed away on the aerial adventure to "Paradise Falls" in South America, Docter and Peterson have used a wide range of variegated colors from the crayon box to achieve emotional tonality over the course of what turns out to be a pretty dangerous and thrilling adventure. Along the way Fredericksen and Russell encounter a multi-colored bird, talking dogs and world-famous explorer Charles F. Muntz.


In a clever flashback before the aerial adventure begins, we see the boy Carl encounter the energetic gap-toothed girl Elie (Elie Docter) only to find they are both fans of adventurer Muntz. Carl had seen Muntz earlier in a black and white newsreel declaring his motto "Adventure is out there!" just before meeting Elie. A beautiful montage, a visual scrapbook of their years together, depicts Carl and Elie's long married life. But now, with Elie gone and urban development pushing in from all sides, Carl decides to go straight up

on the adventure to find "Paradise Falls," a long held but unachieved dream of the married pair.

Everything about *UP* is first rate: story, acting, writing, directing, everything. This movie is so entertaining it would even be compelling in black-and-white. But why deny ourselves a simple delight, the wonderful chromatic array, from muted sepias connoting the past, to shocking rainbows of spectral primacy, and always locked poetically to the emotional colors of the moment and the characters.

Similarly, though *UP* is a winner as a 2-D film, why deny ourselves the additional pleasure of depth? Here is one more element to use in sympathy with the story. The spatial color has been painted with great subtlety as well as with great flair. It is perhaps most dramatic in the sweeping hyperstereo panoramas of the South American wilds. The depth in these verdant expanses seems endless, hyperbolically detailed. And in this and many other aerial sequences there is the subliminal sense of miniaturization, the "puppet theater" effect, as if viewing the earth from a giant's pair of eyes. Here, it works as art, and it works as narrative with a storybook effect.

Certain sequences in *UP* have very little depth. After Carl loses Elie, the screen goes virtually flat and the color, as well, loses vibrancy. But when the z-space opens up it's always exhilarating, after relative spatial dormancy, and the story carries us along with both a temporal and dimensional burst of energy.

Up is Pixar's first 3-D movie. As the first animated 3-D film to open the Cannes Film Festival in May, it received a standing ovation. This considerable start marks real progress for the "immersive" art of stereo cinema. The story is an engine that drives subtle or resonant articulation of the z-axis on the motion picture screen. The 3-D, like the actions of the characters, is always continuously changing. To our binocular delight. 

When 78-year-old Carl Fredericksen casts away with his house he finds an unwitting stowaway in the person of 8-year-old Russell in the Disney/Pixar 3-D releases *UP*.

© Disney/Pixar



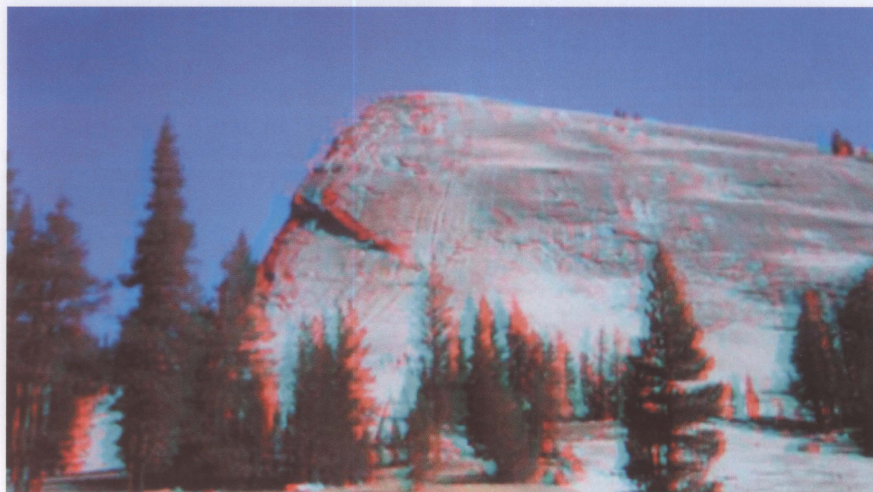
3-D Yosemite Documentary

The 3-D digital technology company 3D Film Factory (3DFF), recently begun production on an original documentary showcasing one of America's greatest natural treasures in 3-D—Yosemite National Park.

Yosemite: Live it in 3-D will chronicle the history, seasonal cycles and visual grandeur of the park, all in high-definition 3-D. Included will be the park's best known activities and natural phenomenon; Yosemite Falls, rafting on the Merced river, climbing Half Dome and El Capitan, tracking bears, the giant sequoia trees and the back country.

"Until now there's been dozens of documentaries produced on Yosemite, but nothing in 3-D, nothing like this", said company president Karl Kozak. "What other format can show off Yosemite like HD-3D? So far all the footage we've acquired gives you the feeling like you're there. It's nothing short of mesmerizing. You'll never be able to watch traditional 2-D nature docs again."

With the larger landscapes much of the shooting was accomplished using a side-by-side, 3-D camera system (3D-SS Pro Rig) and dual HD cameras. Of course, for the close-up and personal nature shots, a split-beam camera rig (3D-SB) was



A frame pair shown in anaglyphic form from *Yosemite: Live it in 3-D*.

© 2009 3D Film Factory

employed. The company's team of veteran stereographers and cinematographers developed all of the 3-D camera rigs utilized in-house. Many of the same 3-D camera systems are now manufactured exclusively by 3DFF and offered for sale through their website www.3dfilmfactory.com.

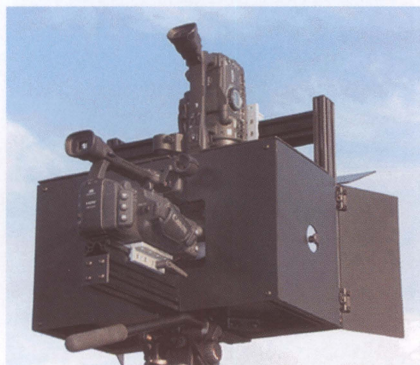
The production, now in its early stages, is expected to be completed by late fall. "It literally takes hundreds of hours of accurate 3-D footage to complete a show like this", said lead stereographer Keith Driver. "Larger projects like this

challenge you. Everyday we set out to improve our shooting techniques to get not only the best shot possible, but the best 3-D we can."

3DFF will make the 3-D Yosemite film available for worldwide rental and/or licensing. A preview trailer for the film can be seen in anaglyph format on YouTube at www.youtube.com/3deefilm.

This column depends on readers for information. (We don't know everything!) Please send information or questions to David Starkman, NewViews Editor, P.O. Box 2368, Culver City, CA 90231.

The 3D-SB split beam mirror rig for HD 3-D video medium and close-up work from 3D Film Factory.



Explore the World
of 3-D Imaging, Past & Present, in

STEREO WORLD

Only
\$32
a year from:



NATIONAL
STEREOSCOPIC
ASSOCIATION, INC.

P.O. Box 86708
Portland
OR 97286

Jonas Brothers 3-D DVD

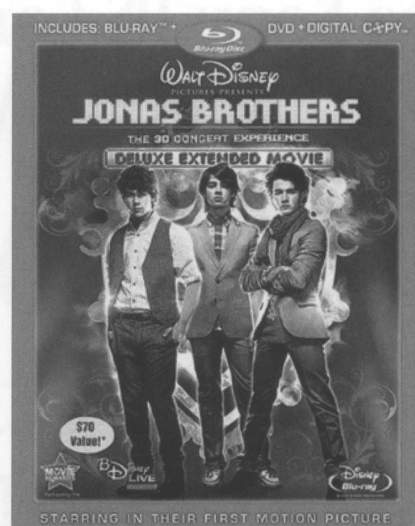
Jonas Brothers: The Concert Experience Deluxe Extended Movie in 3-D was released June 30th by Disney. The documentary has DVD extras: featurettes, extra songs. The two disc DVD and three disc BD/DVD include a digital copy. The film has footage of the Jonas Brothers during their 2008 "Burning Up" concert tour.

Jonas Brothers: The 3D Concert Experience grossed \$765,000 in select IMAX 3D theaters, posting a per screen average of approximately \$15,000 during its opening weekend from Friday, February 27 through Sunday, March 1. The limited IMAX 3D engagement ran for only one week on new IMAX digital projection systems.

The high-energy Walt Disney Pictures rockumentary 3-D feature film event from director Bruce Hendricks (*Hannah Montana/Miley Cyrus: Best of Both Worlds Concert Tour*) blends excerpts from the Brothers' red-hot "Burning Up" concert tour, including guest performances from Demi Lovato and

Taylor Swift. The film also includes exclusive behind-the-scenes footage (which for some reason was shot in 2-D) off-the-wall segments, a never-before-heard song ("Love Is On Its Way"), swarming fans and a lot of JB-style humor-giving fans never-before-seen insights into the lives of Kevin, Joe and Nick. Also featured are the Jonas brothers' parents—don't blink or you'll miss them and their younger brother, who had a non-musical role.

The film did end up as the second highest grossing musical ever, but it also finished in second place for its opening week and fell quickly at the box-office. First place does go to last year's 3-D *Hannah Montana and Miley Cyrus: Best of Both Worlds Concert*, which also featured the Jonas Bros. *Jonas Brothers: The 3D Concert Experience* took in \$12.5 million for its opening weekend on 1,271 screens, *Hannah* had brought in \$31 million on only 683 screens and was held over for weeks.



The Blu-ray DVD of *Jonas Brothers - the 3D Concert Experience*, an extended version of the movie that cut short the 3-D run of *Coraline* in many theaters.

Retail prices are: DVD \$29.99, two disc DVD \$32.99, three disc BD/DVD \$44.99.

Industry Works Toward Home 3-D Compatibility

Development of international standards for the commercialization of home 3-D hardware and content including HDTVs, set-top boxes, optical disc players, movies, games and television programs got a boost in June with the announcement of an industry consortium to deal with technical issues. The 3D@Home Consortium and Korea's 3D Fusion Industry Consortium (3DFIC) are allied with the Korean government and representatives of various consumer electronics manufacturers.

The partner organizations said they plan to establish joint workshops and exhibitions at industry conferences and other venues, and will co-develop educational resources for consumers and industry professionals to keep abreast about developments in home 3-D technology.

The two groups will also share research and information to encourage the development and



The primitive state of anaglyph attempts at 3-D home broadcasts in the 1980s was satirized in a cartoon by the late Tony Alderson. Today's systems are both far more sophisticated and expensive.

validation of content-authoring processes, device test and measurement procedures, and principles and guidelines for interoperability.

More than 40 organizations from Asia, Europe and North America are members of 3D@Home, including Intel, LG Electronics, Mitsubishi, Samsung,

Sigma, Sony, Turner Broadcasting, Walt Disney Studios and XpanD. The consortium said it has established formal relationships with a number of standards bodies and other groups with related objectives.

New Software Brings Full HD 3-D Movies to Sony PS3 and Mac

The 3-D high-definition content delivery company Next3D has announced the first 3-D Movie players for Sony PS3 game consoles and Apple computers. The free downloadable player software, combined with Next3D's content delivery service, will allow consumers to download and play full 1080p theatrical 3-D high-definition movies and other 3-D content on PS3s, Mac computers and, as previously announced, Xbox 360s.

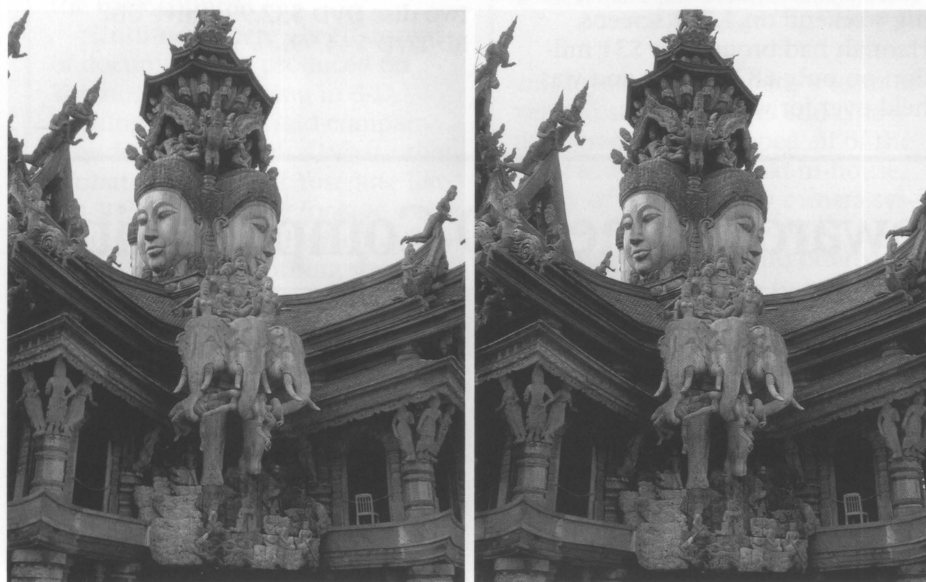
Next3D downloadable content is encoded with patent-pending technology that delivers full stereoscopic 3-D 1080P high-definition to the home over broadband. Users

will be able to download premium pay-to-view Next3D content including theatrical 3-D movies and movies originally produced for IMAX® 3D theaters. Next3D will also offer additional content such as 3-D movie trailers and user-created content channels for independent producers and stereo enthusiasts to post and share 3-D video and still images. The Next3D Movie Player will be free to consumers on every supported platform, including the Xbox 360, PS3 and Mac, and supports the over 2 million 3D-ready TVs already in consumers' homes as well as upcoming 3D-ready TVs from


Sony, LG, Mitsubishi, JVC and others.

The Next3D movie players for Xbox 360 and Sony PS3 were recently demonstrated for videogame industry professionals at the 2009 Game Developers Conference in San Francisco. "The response has been phenomenal," said D.J. Roller, Co-founder of Next3D. "Clearly the movie industry is ready for a home 3-D audience, and the home 3-D audience is primed to emerge. Next3D is on course to be the first to deliver." See www.next3d.com/NEXT_3D.html. 

Coming Soon to Stereo World (Continued from page 3)



Thailand Sanctuary


Using the same sequential, single-camera technique he used for his article "The Walking Streets of Los Angeles," Kim L. Ground stereographed *Prasat Sut Ja-Tum* (The Sanctuary Of Truth) in Pattaya, Thailand. The multifaceted wooden structure is a celebration of the four major philosophical or religious influences on Thai culture: Buddhism, Hinduism, Taoism, and Animism, and its mazes of wings, balconies and sculptures provided ideal subjects for stereo. Ongoing construction and maintenance and cluttered gardens added to the opportunities and challenges. 

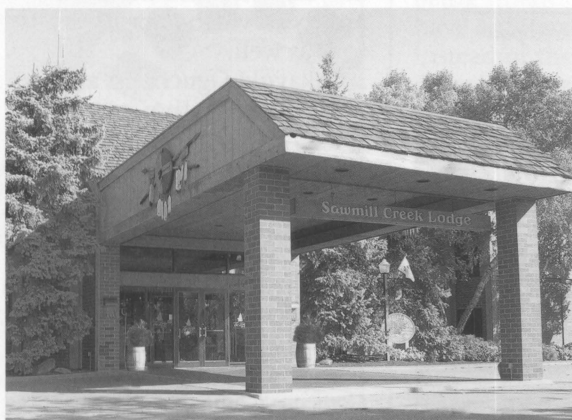
PhotoHistory XIV

The 14th triennial symposium on the history of photography will be held October 16-18 in Rochester, NY. Historians, collectors, photo experts and dealers from around the world will gather Oct. 17 at George Eastman House to hear 19 speakers cover a variety of topics from photo post cards to Daguerreotypes, Autochromes, Woodburytypes and the first digital camera. The event is sponsored

by the Photographic Historical Society and includes a banquet that evening and a photographic Trade Show and Sale Oct. 18, both at the Rochester DoubleTree Hotel.

While none of this year's symposium topics deals specifically with stereography, two of the speakers are NSA members. Terry Bennett will discuss Early Photography in China (see SW Vol. 32 No. 4) and Sarah Weatherwax (SW Vol. 27

No. 6, page 16) will cover Daguerreotypes in Philadelphia, 1839-1860. Another presentation will remember the late NSA member and noted collector and writer Eaton S. Lothrop. More details and registration information are available at www.tphs.org or from PhotoHistory XIV, PO Box 10342, Rochester NY 14610. 



NSA 2010 Stereo on the Lake

*At a convention site that's
more like a tour destination!*

Start planning now for
July 14th-19th

the
36th NSA Convention

www.stereoview.org/convention.html

**Sawmill Creek Resort
on Lake Erie, Huron, OH**

www.sawmillcreekresort.com



Esotropia Revisited (Continued from page 15)

should be no accommodation/vergence conflict, the image will always be in focus."

What are some conditions which indicate predisposition for esotropia in children between 2 and 6 years of age? "Farsightedness and its associated excessive convergence is the principal cause of the onset of convergent strabismus (esotropia) in the 2 to 3 year age group," wrote Arthur Jampolsky with his chapter on "Strabismus"

in Pediatric Ophthalmology, edited by L. Byerly Holt (Lea & Febiger: 1964). "The effort made by the child to overcome farsightedness in order to obtain clear vision," wrote Jampolsky, "may cause the eyes to cross even though the eyes were anatomically originally straight."

Another susceptible group, noted Jampolsky, is "hyperkinetic children, whose general motor activity seemingly is in high gear,

may have excessive amounts of convergence associated with the hyperactivity. The incidence of esotropia is greater in this group."

Analysis of the metrics that were used in the Tsukuda and Murai study, and a determination of any pre-existing or hereditary factors on the part of the subject, would be necessary for a thorough reevaluation of the case. The subject of the study, after surgical correction of the esotropia as a child, is now 25 years old. And the Q Taro anaglyph video appears lost to history as well.

Takayuki Oguchi, in an April 15 email to the author, speculated that copyright issues, as well as the esotropia controversy, may have motivated Shinei Animation to "conceal the existence" of the Q Taro anaglyph video. It may be that the only surviving samples of the 3-D images from this controversial anaglyph movie are the ones that were printed in *Corocoro-Comic Deluxe*. 📺

A panel from page 2 of the article in *Corocoro-Comic Deluxe*, separated into a stereo pair by Andrew Woods.



Exploring the Fundamentals of Digital 3-D Cinema (Continued from page 7)

species of magic instead of a technical art and craft well within the bounds of science. This, too, is changing and Mendiburu's book is indicative of a general move to stereoscopic pedagogy that is now taking place, at seminars, trade shows and digital cinema summits sponsored by organizations like SMPTE and the SMPTE Task Force for 3D in the home. All of this is necessary for stereoscopic production of motion pictures to become a common practice.

This move to more open discussion of stereoscopic tools and their use can also be seen with certification programs such as the "3DIQ" program offered by the 3ality Digital company in Burbank, California. 3ality is the company that provided the stereo camera technology and post-production pipeline for the stereoscopic feature film *U23D* as well as real-time satellite-cast transmission of NFL games in 3-D. The 3ality 3DIQ program offers certifications as "3D

Director," "Stereographer" and "3D Technical Director," among other functions.

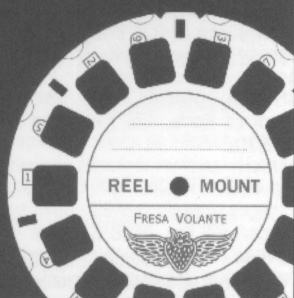
So, where does Mendiburu's book stand in relation to all this? It is a good first flag planted in the quickly shifting sands of stereoscopic production. It's a hybrid that gives some consideration to the existing tool sets for production and post-production right up to color grading and packaging for digital cinema. Particularly useful to editors will be Mendiburu's discussion of how cutting 3-D is different from 2-D. The single most important idea with 3-D editing is "depth continuity" or "depth matching" across the cuts. A fine discussion of practical 3-D editing and using 2-D tools to edit in 3-D is also essential reading here for editors.

Throughout the book are comparison tables and listings of stereoscopic web sites that make this a useful resource for beginners to stereo. Numerous cartoons illus-

trate visual concepts throughout. These are undoubtedly drawn by Mendiburu and give the impression of sketches rapidly executed on a cocktail napkin to explain somewhat complex ideas, a methodology not without a certain charm. They do effectively demonstrate the ideas under discussion.

Focal Press has characterized the user level of Mendiburu's book as "Novice to Intermediate" and that is accurate. A DVD is included with the book and the author has included tutorials on his VFX 3-D work on the independent short 3-D movie *Slow Glass*. While the specific toolsets for stereoscopic production and post-production (particularly) will change, the underlying fundamentals of visually rigorous production for 3-D will not. Those fundamentals, clearly expressed, make this a fine primer for motion picture professionals about to set forth into the world of 3-D movies. 📺

FRESA VOLANTE



BLANK REELS

for Viewmaster® photographers

WWW.FRESAVOLANTE.COM

19th and Early 20th Century Stereoviews For Sale

Over 10,000
all illustrated, graded
& priced, (including glass
views), work by Bedford,
England, Sedgfield etc.
Especially strong on UK
and European views.

Only online at:
www.worldofstereoviews.com

Size Matters in IMAX vs IMIN

As IMAX goes digital and expands into more and more multiplex venues (possibly 400 screens by 2010), a controversy has been growing about the actual size of the screens in these new theaters. Simply put, they are just plain *smaller* than what people have come to expect from the brand that brought us multi-story, 75 foot tall screens that take up an entire side of the building for pioneering cinema formats like IMAX, OMNIMAX, SOLIDO, etc. As well as being smaller, the new screens have a different aspect ratio, 1.9:1 instead of the classic IMAX 1.43:1. The changes have made the system more affordable for existing complexes to install, and for digital projection to fill the screen with a bright image—especially vital for digital 3-D projection.

But the reaction of many IMAX fans has been outrage at what has been called names from “fake IMAX” to “Liemax.” Two websites

offer maps detailing which theaters contain which version of IMAX for those determined to see full size projection of large format film frames and possibly willing to boycott the smaller screens. For fans able to show up early, simply sitting closer will offer a partial solution at least for 2-D films. But owners of existing full size IMAX theaters fear the bad press may hurt business, and they don't like the same name being used for screens of lesser size. The company has been urged to use a different name for the new theaters (“IMIN” probably isn't on their list), but some way of informing the public of relative screen size may be in the works. *LF Examiner*, the online trade publication of the large-format motion picture industry, offers maps, links and continuing, detailed coverage of the story at www.lfexaminer.com. 

The 3D Center of Art & Photography

is the only museum and gallery devoted
to 3D imagery in the US.

Changing gallery exhibitions
and theatre shows of
contemporary 3D artwork
by US and international artists;

Public classes in 3D techniques;

Vintage stereo cameras, viewers
and 3D paraphernalia;

Historic images and stereoviews;

A growing research library,
and more...

Submit work for consideration
by the Creative Committee for
exhibition at the 3D Center.
Proposals always welcome.



1928 NW Lovejoy
Portland, OR 97209
503.227.6667
www.3dcenter.us

Now in its 6th year of operation
with over 11000 visitors.



CLASSIFIED

Buy, Sell,
or Trade
it Here

For Sale

ARCHITECTURE and Design Classics in View-Master® 3D. Works by Frank Lloyd Wright, Charles and Ray Eames, Bruce Goff, Antonio Gaudi and others. For info, visit viewproductions.com

CENTRAL PACIFIC RAILROAD Photographic History Museum. Stereographs of the first transcontinental railroad are now on display at: <http://CPRR.org>

NEW REVISED EDITION of John Waldsmith's "Stereo Views, An illustrated History and Price Guide" is available signed by the author, \$24.95 softbound, add \$2.95 postage and handling. (Foreign customers add an additional \$1.25.) Please note there is no hardbound of this edition. Mastercard or Visa accepted. John Waldsmith, PO Box 83, Sharon Center, OH 44274. Website: www.YourAuctionPage.com/Waldsmith.

PHILADELPHIA EXPO 1876, Spanish Amer. War, Foreign, National Cemetery (Bell 1867), Boston, Minn., Wash. D.C., Comics, New York, Wisc. Dells. All late 1800s. Gloria, (847) 818-9376, gloribelove@yahoo.com.

Q-VU FOLDOVER MOUNTS simplify mounting your print stereo views. Sample kit \$8. Med. format mounts, white or (new!) black. Beginner's stereo kits: camera, viewer, views, etc., \$89.99 up. Q-VU, Box 55, Holtville, CA 92250-0055.

STEREO CAMERA Verascope f40 with leather case, \$400. View-Master/rodenstok/made in Germany with film cutter, lighted \$350. Stereo viewer Wollensak, inter ocul. focusing, lighted \$250. Stereo viewer inter-ocul. focusing, lighted in orig. packaging, never used, Model 14 \$300. Stereo Camera Wollensak with leather case in orig packaging, possible never used \$400. Stereo viewer Arrow, repeater 10 slides frm 35mm slide film, lighted, inter-ocul. focusing \$350. Stereo viewer Kodak II inter-ocul. focusing, rheostat light \$350. Stereo viewer Belkaskop 7 sprocket 35mm slide film, for Belplasca camera \$200. Stereo viewer antique, ca. 1906, focusong, large lenses, beautiful, perfect for 120 size slides. Hundreds of glasses of all formats for mounting slides. Dragan Smekal, OPAL1@SHAW.CA.

As one of the benefits of membership, NSA members are offered free use of classified advertising. Members may use 100 words per year, divided into three ads with a maximum of 35 words per ad. Additional words or additional ads may be inserted at the rate of 20¢ per word. Please include payments with ads. We cannot provide billings. Ads will be placed in the issue being assembled at the time of their arrival unless a specific later issue is requested.

Send all ads, with payment, to:
STEREO WORLD Classifieds,
5610 SE 71st, Portland, OR 97206.

(A rate sheet for display ads is available from the same address. Please send SASE.)

For Sale

STEREO PHOTOGRAPHY WORKSHOP Videos. Topics include Making Anaglyphs, 2D To 3D Conversion, Making Stereo Cards, etc. More coming. \$25 each. Details: <http://home.comcast.net/~workshops/> or send SASE for list to Dennis Green, 550 E. Webster, Ferndale, MI 48220.

STEREO VIEWCARD book boxes. Now accepting orders for handmade, fully personalized boxes. Fit sleeved viewcards. Send SASE for full details to Boxcrafters, PO Box 55, Holtville, CA 92250 or call (760) 356-4102.

STEREO VIEWS FOR SALE on our website at: www.daves-stereos.com email: cdwood@ptd.net or contact us by writing to Dave or Cyndi Wood, PO Box 838, Milford, PA 18337, Phone: (570) 296-6176. Also wanted: views by L. Hensel of NY and PA.

STEREOVIEW AUCTION PRICES. Only \$10.00 in CD format!! Great for people buying from auctions and for collectors who want to know the latest realized auction values. Only numbered views over \$50 are listed. Doc Boehme, PO Box 326, Osakis, MN 56360.

Wanted

ALASKA & KLONDIKE stereos needed, especially Muybridge; Maynard; Brodeck; Hunt; Winter & Brown; Continent Stereoscopic. Also buying old Alaska photographs, books, postcards, ephemera, etc. Wood, PO Box 22165, Juneau, AK 99802, (907) 789-8450, dick@AlaskaWanted.com.

ANY IMAGES of Nevada City or Grass Valley, California. Mautz, 329 Bridge Way, Nevada City, CA 95959, cmautz@nccn.net.

BRISTOL, CONNECTICUT Stereoviews wanted. Tom La Porte, 126 Fleetwood Rd., Bristol, CT 06010.

COLLECT, TRADE, BUY & SELL: 19th Century images (cased, stereo, Cdv, cabinet & large paper) Bill Lee, 8658 Galdiator Way, Sandy, UT 84094. billleete@juno.com Specialties: Western, Locomotives, Photographers, Indians, Mining, J. Carbutt, Expeditions, Ships, Utah and occupational

Explore the World of Stereo Images

Please start my one-year subscription to
Stereo World magazine and enroll me as a
member of the National Stereoscopic Association.

- ☐ U.S. membership mailed third class (\$32).
☐ U.S. membership mailed first class for faster delivery (\$44).
☐ All international memberships (\$44).
☐ Send a sample copy (U.S. \$6.00, all other \$7.50).

Please make checks payable to the National Stereoscopic Association.
Foreign members please remit in U.S. dollars with a Canadian Postal Money order, an International Money Order, or a foreign bank draft on a U.S. bank.

Name _____

Address _____

City _____

State _____

Zip _____



National Stereoscopic Association

PO Box 86708, Portland, OR 97286

The Only National Organization Devoted Exclusively To Stereo Photography, Stereoviews, and 3-D Imaging Techniques.

Wanted

CORTE-SCOPE VIEWS or sets, any subject or condition. No viewers unless with views. John Waldsmith, 302 Granger Rd., Medina, OH 44256.

I BUY ARIZONA PHOTOGRAPHS! Stereoviews, cabinet cards, mounted photographs, RP post cards, albums and photographs taken before 1920. Also interested in Xeroxes of Arizona stereographs and photos for research. Will pay postage and copy costs. Jeremy Rowe, 2120 S. Las Palmas Cir., Mesa, AZ 85202.

INDIANA EXPOSITION. Not-for-profit Indianapolis neighborhood organization seeking historic photos from 1870s Indiana Exposition for history display. Copy/photo/ scan of 1/2 of stereograph would be ideal. Have seen poor photocopies labeled "Salter & Judd," "Indiana Exposition," and "Indianapolis & Vicinity." If interested, can provide extensive history/ details. Please contact: tiffany@homehistoryhunter.com.

INFORMATION about or views by stereographers J.H. Harter (NV, MO) and H.D. Rumsey (Homer, NY). Bart Conchar, 86 Benson Dr., Harpers Ferry WV 25425, wvconchar@frontiernet.net, (304) 876-3756.

MUYBRIDGE VIEWS - Top prices paid. Also Michigan and Mining - the 3Ms. Many views available for trade. Leonard Walle, 47530 Edinborough Lane, Novi, MI 48374.

NEW WORLD TECH: Atomic/Nuclear and related scientific studies. Printed dual images & holographic. Send Cat. M Zebrowski, 235 E Santa Clara St. #1101, San Jose CA 95113-1927.

NEWBURYPORT, MASS - Looking to buy views by Mosely, Meinert, Coombs, Reed, McIntosh, and other photographers. Scott Nason, 12 Marlboro St., Newburyport, MA 01950, scottf.nason@comcast.net 978-462-2953.

PANAMA - ASPINWALL: Collector looking to buy early related stereoviews, CDVs or other photographic views. Please contact Vicente Pascual at vap@vpinvestment.com.

PHOTOGRAPHIC LANTERN SLIDES: All subjects, manufacturers. Tom Rall, 703-534-8220, marketflea@aol.com

SINGLE VIEWS, or complete sets of "Longfellow's Wayside Inn" done by D. C. Osborn, Artist, Assabet, Mass., Lawrence M. Rochette, 169 Woodland Drive, Marlborough, MA 01752.

THE DETROIT Stereographic Society invites you to attend our monthly meetings at the Livonia Senior Center, on the second Wednesdays, September through June. Visit our website <http://home.comcast.net/~dssweb/> or call Dennis Green at (248) 398-3591.

WHITE MOUNTAINS: Early photographic views and stereoviews of new Hampshire White Mountain and northern NH regions, 1850s-1890s wanted for my collection. Town views, main streets, bridges, homes, occupational, coaches, railroads, etc. E-mail images to dsundman@LittletonCoin.com, or send photocopies to David Sundman, President, Littleton Coin Company, 1309 Mt. Eustis Rd., Littleton, NH 03561-3735.

Wanted

WILL PURCHASE STEREOS by Stiff, Pepper, Angell, D.S. Mitchell, Rodacher and Blanchard, Pollack (and partners), Coules and McBride, Melander and Carbutt of Dakota Images or other Dakota photographers. If you wish not to sell, I would appreciate good xerox copies I may know what images exist. Research continues. Robert Kolbe, 636 West 21st St., Sioux Falls SD 57105, (605) 332-9662.

Wanted

WILLIAM ENGLAND stereos. Would like to contact collectors for academic research project. Especially interested in rare views and dags. Please contact Gerlind Lorch at william.englend@web.de.

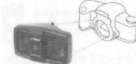
Berezin Stereo Photography Products



3D HMD
Head mounted display for 3D Visualization. **\$1195.95**



NuView Camcorder Adapter
Shoot 3D Video with your Camcorder **\$199.95**



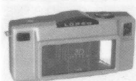
3D Lens in a Cap
Convert your SLR camera to 3D. **\$59.95 (109.95 for Digital).**



3D Shutter Glasses
From \$15



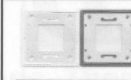
3D Glasses
Polarized, anaglyph...



Loreo 3D Camera
Shoot 3D, develop anywhere **\$59.95**



3D Books...Many titles



Mounting Supplies
Slip-In
Gepe Glass Mounts
RBT Mounts
Heat seal Mounts (RMM and Others)
Q-Vue Mounts
Tabs
Instructional books
Mounting Guide



3D Slide Viewers
Realist
2x2x2
Achromatic
Lighted
Halogen Bulbs



3D Print Viewers
Monitor Viewers
Viewmagic
Pokescope
Screenscope
Lognettes
Holmes Stereoscopes
Cardboard Viewers



Huge selection of New Viewmaster Reels!

BEREZIN STEREO PHOTOGRAPHY PRODUCTS,

21686 ABEDUL, MISSION VIEJO, CA 92691 USA

PHONE (949) 215-1554, FAX (949) 581-3982

WEB SITE: WWW.BEREZIN.COM/3D EMAIL: INFO@BEREZIN.COM

WE TAKE ALL MAJOR CREDIT CARDS. VISIT OUR ONLINE WEB STORE, WRITE OR CALL FOR CATALOG

ARCHIVAL SLEEVES: clear 2.5-mil Polypropylene

NEW CDV (2 3/4" X 4 3/8")	per 100:	\$9	case of 1000:	\$85
CDV POLYESTER 3-mil 3 3/8" X 4 3/8"	per 100:	\$15	case of 1000:	\$140
POSTCARD (3 3/4" X 5 3/4")	per 100:	\$10	case of 1000:	\$90
4" x 5"	per 100:	\$11	case of 1000:	\$90
STEREO / #6 3/4 COVER (3 3/4" x 7")	per 100:	\$11	case of 1000:	\$100
STEREO POLYESTER (3-mil)	per 100:	\$24	case of 1000:	\$230
CABINET / CONTINENTAL (4 3/8" x 7")	per 100:	\$12	case of 1000:	\$110
#10 COVER / BROCHURE (4 3/8" x 9 5/8")	per 50:	\$12	case of 500:	\$110
5" x 7"	per 50:	\$10	case of 200:	\$35
BOUDOIR (5 1/2" X 8 1/2")	per 25:	\$9	case of 500:	\$110
8" x 10"	per 25:	\$10	case of 200:	\$65
10" x 14" MUSEUM BOX SIZE	per 10:	\$11	case of 100:	\$85
11" x 14"	per 10:	\$10	case of 100:	\$70
16" x 20"	per 10:	\$24	case of 100:	\$160

Russell Norton, PO Bx 1070, New Haven, CT 06504-1070

US SHIPPING (48 States): \$4 per order. Institutional billing. (2009)

Connecticut orders add 6% tax on entire total including shipping.

Explore the World of 3-D Imaging, Past & Present, in **STEREO WORLD**

Only **\$32** a year
from



NATIONAL
STEREOSCOPIC
ASSOCIATION

P.O. Box 86708
Portland, OR 97286

Carl's Clean & Clear Archival Sleeves Polypropylene Acid Free

Cdv (2-3/4 x 4 3/8)	100 for \$ 9	1000 for \$ 80
Snapshot (3-1/4 x 4-3/8)	100 for \$ 9	1000 for \$ 85
Postcard (3-3/4 x 5-3/4)	100 for \$10	1000 for \$ 90
4 x 5	100 for \$10	1000 for \$ 90
Stereo (3-3/4 x 7)	100 for \$11	1000 for \$100
Cabinet (4-3/8 x 7)	100 for \$11	1000 for \$110
5 x 7	50 for \$10	200 for \$ 35
#10 Cover (4-38 x 9-5/8)	50 for \$11	200 for \$ 35
Boudoir (5-1/2 x 8-1/2)	25 for \$ 9	200 for \$ 60
8 x 10	25 for \$10	200 for \$ 70
8-1/2 x 11	20 for \$10	200 for \$ 85
11 x 14	10 for \$10	100 for \$ 75
16 x 20	10 for \$25	100 for \$200

Total

U.S. Shipping—\$4 per order

California Residents add 7.38% sales tax

Grand Total

Carl Mautz

329 Bridge Way
Nevada City, California 95959
530-478-1610 Fax 530-478-0466
cmautz@nccn.net

• Order Sleeves or Books online at www.carlmautz.com

OVER A BILLION SERVED!



WELCOME TO
AMERICAN PAPER OPTICS -

MAY I TAKE
YOUR ORDER,
PLEASE?

That's no short order! After manufacturing over 1,000,000,000 paper 3D glasses, we know we can satisfy your taste for 3D. American Paper Optics, the world's leading manufacturer and marketer of 3D glasses and 3D products, is your one stop source for anything 3D. A variety of frame styles, specialty optics, full color printing, and intricate diecutting capability make it easy for you to **"Have it your way."**

Our menu of 3D glasses include:

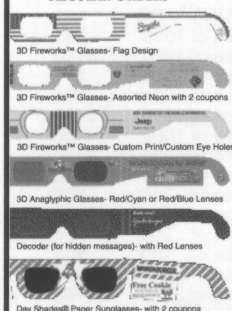
- Anaglyphic (red/cyan - red/blue - red/green)
- Polarized (linear - circular)
- Pulfrich- Dark/clear (television & video)
- Diffraction- rainbow effect (3D fireworks)
- Decoders (red or blue for hidden messages)

Really hungry for great 3D? American Paper Optics is

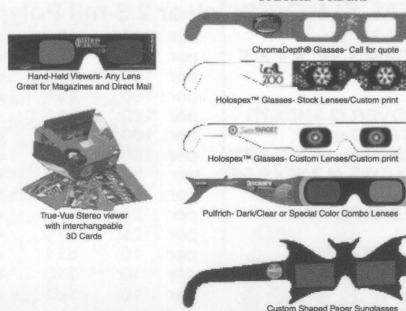
- the exclusive manufacturer of:
- ChromaDepth® 3D (Clear Lenses that create amazing 3D effects from Color)
- HoloSpec® (holographic images floating on points of light)
- True Vue 3D (our unique line of patented stereo viewers)
- ColorCode 3-D™ (Amazing New Danish 3D system)

Satisfied customers have included National Geographic for 20,000,000 anaglyphic glasses and Discovery Channel for 6,000,000 pulfrich glasses for *Shark Week* in 3D. Talk about fresh "seafood". Over 5,000,000 Radio City Music Hall patrons have lined up to wear our polarized glasses to view the *Christmas Spectacular* in 3D. We produced 3D delicious delights for the March 2005 -2008 issues Of Nickelodeon Magazine in 3D. We turned the NBC show *Medium* into eye candy with more than 10,000,000 3D inserts distributed via TV Guide. Nearly 7,000,000 readers went "Swimming" in 3D with our glasses in the 2007 Sports Illustrated Swimsuit edition in 3D. We spiced up the 3D DVD market, cooking up 20,000,000 3D glasses for *Shrek* 3D, 16,000,000 for *Barbie Pegasus* 3D, and 40,000,000 for *Hannah Montana* 3D. Recently, we have served up the best 3D effects on DVD for such titles as *Journey to the Center of the Earth* 3D, *Polar Express* 3D, and *Fly Me to the Moon* 3D, as well as over 125,000,000 glasses for 3D commercials during Super Bowl XLIII. Our drink menu has included 3D projects for Van Gogh Vodka, Zima, Budweiser, Coca-Cola, and Coors Light. **Thirsty for more? Call us and we will serve you up a shot of 3D!**

REGULAR ORDERS



SPECIAL ORDERS



AMERICAN
PAPER OPTICS LLC

3080 BARTLETT CORPORATE DRIVE, BARTLETT, TN 38133
901-381-1515 • 800-767-8427 • FAX 901-381-1517

www.3dglassesonline.com

Jefferson Stereoptics

John Saddy

50 Foxborough Grove
London, Ontario N6K 4A8
CANADA

Phone: (519) 641-4431

Fax: (519) 641-0695

E-mail: john.saddy.3d@sympatico.ca

Website: <http://www3.sympatico.ca/john.saddy.3d>

**FINE OFF-EBAY STEREOVIEW AUCTIONS WITH DIRECT BIDDING ON-LINE,
AS WELL AS BY PHONE, FAX, E-MAIL TO ME, AND POSTAL MAIL.
(Paper Catalogues available.)**

You are welcome to register for my stereoview auctions. There is no charge.
I also have a separate registration for my View-Master (Etc.) Auctions, which have
more-modern stereo and 3-D formats. I am presently selling off the Willie Aarts Collection
with some of the Rarest of the Rare in View-Master reels and viewers.

I SPECIALIZE IN CONSIGNMENTS.

Consignments welcome,
from a single view to giant
collections.

← Left: Helene Leutner
(German Actress)

→ Right: The Young Velocipedist

← Left: Edward Stokes, who shot
Jim Fisk over
a woman.

→ Right: View from the wood car,
behind the locomotive
in full motion.

← Left: Tissue Genre View.

→ Right: General U.S. Grant

